BEFORE THE
SHORELINES HEARINGS BOARD
STATE OF WASHINGTON

FRIENDS OF THE EARTH, PILCHUCK AUDUBON SOCIETY, PORT GARDNER INFORMATION LEAGUE, PUGET SOUND ALLIANCE, SEATTLE AUDUBON SOCIETY, SIERRA CLUB, and WASHINGTON ENVIRONMENTAL COUNCIL, Appellants, v. UNITED STATES NAVY, CITY OF EVERETT, and STATE OF WASHINGTON DEPARTMENT OF ECOLOGY, Respondents.	SHB NO. 87-31 ORDER DENYING MOTION FOR RECONSIDERATION

On May 25, 1988, Friends of the Earth, et al. filed its Motion for Reconsideration of the final decision in this matter.

Having considered the Motion for Reconsideration, and

Having considered the record and file herein and being fully advised

NOW THEREFORE IT IS ORDERED that the Motion for Reconsideration is denied.

DONE at Lacey, WA this 31st day of May, 1988.

SHORELINES HEARINGS BOARD

WICK DUFFORD, Chairman

LAWRENCE J. FAULK, Member

NANCY BURNETT, Member

(See Separate Opinion)
JUDITH A. BENDOR, Member

(See Separate Opinion)
LES ELDRIDGE, Member

(See Separate Opinion)
DENNIS McLERRAN, Member

BEFORE THE SHORELINES HEARINGS BOARD
STATE OF WASHINGTON

FRIENDS OF THE EARTH, PILCHUCK AUDUBON SOCIETY, PORT GARDNER INFORMATION LEAGUE, PUGET SOUND ALLIANCE, SEATTLE AUDUBON SOCIETY, SIERRA CLUB, and WASHINGTON ENVIRONMENTAL COUNCIL, Appellants, v. UNITED STATES NAVY, CITY OF EVERETT, and STATE OF WASHINGTON DEPARTMENT OF ECOLOGY, Respondent.	SHB NO. 87-31 OPINION ON MOTION FOR RECONSIDERATION

On May 25, 1988, Friends of the Earth, et al. filed its Motion for Reconsideration of the final decision in this matter. We have considered the Motion for Reconsideration and the record and file herein. We conclude that the shoreline permit as issued, absent further conditions, violates the Shoreline Management Act, Chpt. 90.48 RCW and implementing regulations, and the City of Everett Shoreline Master Program. The findings and conclusions supporting this Opinion are more fully set forth in the May 17, 1988 Opinion. We therefore conclude that the Motion for Reconsidered should be GRANTED.

DONE this 31st day of May, 1988.

SHORELINES HEARINGS BOARD

Judith A Bendor
JUDITH A. BENDOR, Member

Les Eldridge
LES ELDRIDGE, Member

Dennis McLerran by JH
DENNIS McLERRAN, Member

[See Separate Opinion]
WICK DUFFORD, Chairman

[See Separate Opinion]
LAWRENCE J. FAULK, Member

[See Separate Opinion]
NANCY BURNETT, Member

BEFORE THE SHORELINES HEARINGS BOARD
STATE OF WASHINGTON

FRIENDS OF THE EARTH, PILCHUCK AUDUBON SOCIETY, PORT GARDNER INFORMATION LEAGUE, PUGET SOUND ALLIANCE, SEATTLE AUDUBON SOCIETY, SIERRA CLUB, WASHINGTON ENVIRONMENTAL COUNCIL and TULALIP TRIBES OF WASHINGTON, Appellants, v. UNITED STATES NAVY, CITY OF EVERETT, and STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, Respondent.	SHB Nos. 87-31 and 87-33 FINAL FINDINGS OF FACT CONCLUSIONS OF LAW AND ORDER

These consolidated matters were heard concurrently with appeals brought under Chapter 43.21B before the Pollution Control Hearings Board. The instant cases concern requests for review made pursuant to the Shoreline Management Act relating to a shoreline substantial development and conditional use permit issued by the City of Everett to the United States Navy and approved by the Washington Department of Ecology (Ecology).

The hearings were held before the Shorelines Hearings Board, Wick Dufford (presiding), Lawrence J. Faulk and Judith A. Bendor, Nancy Burnett, Dennis J. McLerran, and Les Eldridge. The combined hearings commenced in Everett, Washington, on January 15, 1988 and thereafter in Seattle, Washington and Lacey, Washington on January 19-22, 25-29, February 10-12, 17-19 and March 7-11, 1988. In all, 21 days were devoted to the hearings.

Appellants Friends of the Earth, et al., were represented by Todd D. True, Attorney at Law. The Tulalip Tribes of Washington were represented by Allen H. Sanders, Attorney at Law. Respondent Washington Department of Ecology was represented by Charles W. Lean and Peter R. Anderson, Assistant Attorneys General; the United States Navy was represented by Commander Thomas N. Ledvina, JAGC, and Alan P. Shapiro, Office of Counsel, Naval Facilities Engineering Command. The City of Everett was represented by Walt Sellers, Assistant City Attorney.

The Board conducted a site view on January 15, 1988. Now, having considered the testimony, exhibits and arguments of counsel, the Shorelines Hearings Board makes these

FINDINGS OF FACT

I

The United States Navy proposes to create a homeport facility for an aircraft carrier battlegroup in Everett, Washington, on Port Gardner Bay in Puget Sound. The project would involve the

construction of berthing and support facilities for up to 15 ships -- a mix of nuclear-powered and conventional craft, including a carrier, frigates, cruisers, destroyers and mine countermeasure ships.

The homeport is proposed to be built in and adjacent to the East Waterway, a portion of Everett's urban waterfront which for over a century has been the repository for outpourings of industrial wastes.

To make the homeport deep enough for the large ships involved, the Navy wishes to dredge the East Waterway. Overall the dredging work, combined with excavations necessary to reconfigure the site, would encompass 3,305,000 cubic yards of material.

The Navy proposes to dispose of this material at a site in deep water, a little more than one and two/thirds miles (approximately 9,000 feet) southwest of the Waterway. This site is referred to as the RADCAD (Revised Application Deep Confined Aquatic Disposal) site.

The general concept of the disposal operation is to deposit the "contaminated" spoils within a discrete locale on the bottom of the bay, and then to cover them with enough "clean" material to form a cap which will effectively seal off the contamination and isolate it from the marine environment.

II

On March 2, 1987, Ecology issued the Navy a certification pursuant to section 401 of the Federal Clean Water Act (33 U.S.C. Sec. 1341). The certification, in effect, provided the State's determination of

"reasonable assurance" that the Everett homeport project, as conditioned, will not violate applicable water quality standards.

Along with the water quality certification Ecology issued a temporary modification of water quality standards (Order No. DE 87-119) to the Navy, authorizing the use of dilution zones during the actual periods of dredging and disposal.

Also on March 2, 1987, Ecology formally advised of its concurrence in the Navy's determination that the Everett homeport dredging project is consistent with the State's plan adopted pursuant to the Federal Coastal Zone Management Act. (16 U.S.C. Sec. 1456).

On March 31, 1987, the various appellant environmental organizations filed with the State Pollution Control Hearings Board an appeal of the water quality certification, the temporary water quality standards modification and the coastal consistency determination. Appellant Tulalip Tribes filed a parallel appeal on March 31, 1987. These appeals were given our numbers PCHB 87-63 and 87-64 and consolidated for hearing.

III

The Navy, by agreement with the State, also sought a permit under the State Shoreline Management Act (SMA) from the City of Everett. On June 10, 1987, this application was approved by the City. Thereafter, on July 8, 1987, Ecology approved the City's shorelines action. The shorelines approval was appealed to the State Shorelines Hearings

Board by the environmental organizations on July 29, 1987, and by the Tulalip Tribes on August 4, 1987. These appeals were docketed as SHB Nos. 87-31 and 87-33 and consolidated for hearing. Subsequently, a procedure was worked out with all parties by which the water quality and shorelines appeals were heard concurrently by the two Boards.

IV

After the various approvals from the City of Everett and the State of Washington were received, the United States Army Corps of Engineers issued a permit for the Navy homeport project pursuant to Section 404 of the Federal Clean Water Act (33 U.S.C. Sec. 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. Sec. 403).

V

Findings of Fact more specifically describing the project, the environmental record relied on, and the water quality and environmental impacts of the dredging and deep water confined disposal operation are set forth in the companion decision of the Pollution Control Hearings Board. These Findings are hereby adopted, attached as Appendix A hereto, and by this reference incorporated in this Opinion.

VI

The City's shoreline approval adopts the findings of the Everett Planning Commission on the homeport project and incorporates an extensive set of conditions recommended by the Planning Commission.

Included among these conditions is a requirement that the Navy comply with all provisions of Ecology's water quality certification including the monitoring plan adopted pursuant thereto. This means, in effect, that the smaller-scale first year's dredging and disposal effort (Phase I) will serve as a pass/fail test for the conduct of the large-scale second year program (Phase II). If Phase I does not meet the criteria for success established in the water quality certification, no further in-water disposal of dredged materials is approved.

VII

The East Waterway is within an environment designated "urban" by the Everett Shoreline Master Program (ESMP). The deep water RADCAD site is inside Everett's city limits, but is in an area which the Cit has not formally designated for shorelines management purposes.

The ESMP at present contains shorelines designations only from the extreme low tide line landward. The nearest designated area to the RADCAD site is "conservancy recreation."

Deep water dredge spoils placement and disposal was not anticipated by the drafters of the ESMP and therefore this specific activity is not addressed by the master program. It is, thus, neither expressly prohibited nor expressly allowed. The City treated the Navy's application for confined deep water disposal as an "unlisted" use, subject to the criteria for a conditional use permit. Ecology concurred in the City's approach.

VIII

The City approved a previous permit application for dredge spoils placement and disposal at a different deep water site in Port Gardner Bay, following the approach of processing the proposal as a conditional use application. Another similar application is before the City now and is being handled in the same way.

The RADCAD site, as all other areas below the line of extreme low tide, is a "shoreline of statewide significance" under the Shoreline Management Act.

IX

A portion of Smith Island has been identified as an alternative disposal site for the dredge spoils from the East Waterway. This upland alternative is located in the Snohomish River estuary adjacent to the Steamboat Slough channel. The site is about four miles north of the homeport site and includes approximately 110 acres.

The eastern portion of the site is pasture land, the western part was formerly used as a log storage and sorting area.

X

Use of Smith Island would involve hydraulic dredging and transport of the dredged materials as a slurry through a pipeline from the East Waterway.

Two site designs have been evaluated; an excavated design and an elevated one. Both would involve the construction of substantial containment dikes, and coverage of contaminants with a clean cap.

The excavated design would involve digging out a basin on the island and dumping the wet dredge spoils into it. If no liner were employed, anaerobic conditions could be maintained but the wet dredge spoils would be placed in direct hydraulic continuity with the groundwater table. Use of this approach would necessitate finding a disposal site for all of the material dug out of the basin to make room for the dredge spoils.

The elevated design would involve placing the contaminated sediments above the existing ground and the water table within a raised perimeter dike. Because the dredge spoils would eventually dry, exposure to oxygen would risk the release of contaminants previously bound to the sediments in the anaerobic state. The elevated alternative, therefore, would need to be lined in order to contain leachate from the newly aerobic sediments. A leachate collection and treatment system would also need to be constructed.

XI

The Smith Island designs present some risk of adverse environmental impacts from the escape of contaminants to the ground or surface waters.

The excavated alternative presents engineering difficulties and additional materials disposal problems. The soils involved are soft and peaty. Wood residues remain from the old log sort yard. If excavated, these materials would be in the nature of spoils, not

readily usable as fill on other properties. The soft nature of the native soils would also require rather flat side slopes to maintain the stability of the banks, thus reducing the capacity of the basin created.

The elevated alternative would present further engineering problems. A liner would be required to prevent leachate from the sediments from escaping. However, the soft soils on site would in places settle over time and the liner would have to be able to maintain its integrity when this occurred. There are doubts that a liner intended to accommodate soils settlement could be installed with confidence that it would not rupture over time. Repairing any such rupture would be difficult. Again, because of the soft soils foundation, the 20-25 foot high dikes for the elevated alternative would have to be thick and rather flatly sloped.

XII

Smith Island lies within the 100 year flood plain of the Snohomish River. Therefore, unless the containment dikes are high enough to stand above this flood, the site will be inundated when such an event occurs. Flooding, of course, would threaten the integrity of the disposal site. But if the dikes are above the 100 year flood level, the area of the disposal site will effectively be removed from the flood plain, with adverse effects on flood stream regimen, possibly causing damage elsewhere.

XIII

Some loss of contaminants from the Smith Island site would occur under either alternative, carried over the weir into the surface waters in the excess liquid drained from the site after deposit of the slurry. We find, however, that this loss probably would be no greater than the mass loss expected during disposal at the RADCAD site. Furthermore, flocculant could be used which would substantially reduce even this loss.

XIV

Overall, we are persuaded that it is possible from a technical standpoint to build either of the Smith Island alternatives. While genuine risk is not eliminated, we find that the Smith Island alternatives could likely be implemented without the occurrence of significant environmental harm.

XV

Coupled with our similar findings as to use of the RADCAD site, this means that either deep water confined disposal or use of the identified upland alternative will, more probably than not, be successful in preventing major adverse impacts caused by moving the contaminated materials out of the East Waterway.

Assuming some benefits from cleaning up the East Waterway, the net effect should therefore be an environmental quality gain, regardless of the alternative used.

XVI

If contaminants are found to be escaping at either the RADCAD or the Smith Island site, remedial methods are available. At the RADCAD site the remedy is simple and straightforward: put on more capping material. At Smith Island the means of remediation are more varied, but they present more technical complexity. We perceive no advantage of one site over the other in terms of the likely effectiveness of remedial actions, should such actions become necessary.

XVII

What remains to be considered are the risks involved in the physical locations of the different disposal sites. The Smith Island site is in the Snohomish River estuary, an area of major importance to the anadromous fish resource. The estuary is one of the most productive in the Puget Sound. Four species of salmon spawn and rear in the Snohomish River and estuary system. Dolly Vardon char, steelhead and sea-run cutthroat trout also inhabit the estuary. The river mouth and adjacent nearshore shallows of Port Gardner Bay provide a vital habitat for out-migrating juveniles. The deep waters of the open bay are not as critical to anadromous fish as are the shallows of the estuary proper.

XVIII

The major resource located nearest the RADCAD site is a so-called dungeness crab "condominium." We find that this proximity presents

little cause for concern. An escape of contamination from the confined aquatic disposal cap would not reasonably be expected to migrate upslope to where the large crab populations are, in concentrations likely to do much harm.

Moreover, such a contaminant escape would be even more remote from and less likely to affect the critical nearshore shallows and estuarine waters essential to juvenile salmonids.

Conversely, a failure of the dredge spoil disposal project at Smith Island would impose a direct and imminent threat of harm to the fisheries resources which depend on the estuary and nearshore shallows.

As stated, the risk of such failure is not high at either disposal locale, but if such were to occur, on purely locational grounds we find that depositing dredged material at the estuarine upland site would likely prove more detrimental to the shoreline resource than depositing it in the deep water of the bay.

XIX

In this shorelines permit process the City of Everett had before it and relied upon (as did the Department of Ecology) the same eight volumes of environmental impact statement documents that were used in connection with the water quality certification and related decisions.

XX

Any Conclusion of Law which is deemed a Finding of Fact is hereby adopted as such.

From these Findings, the Board comes to these

CONCLUSIONS OF LAW

I

We review the substantial development and conditional use permit at issue for consistency with the Everett Shoreline Master Program (ESMP) and the Shoreline Management Act (SMA). The appellants have the burden of proof. RCW 90.58.140.

II

Appellants assert that the proposed confined aquatic disposal of contaminated dredge spoils is inconsistent with the policies of the SMA, particularly those relating to shorelines of statewide significance.

The promotion of navigation is central to the SMA. Among the types of development allowed, the building of ports is given a high priority. The dredging of marine beds necessary for port building presupposes the disposal of the resultant spoils. Deep water disposal of such spoils, if otherwise consistent with SMA policies, furthers the Act's navigational aims. Beyond navigation, the SMA's policies generally look to limiting adverse environmental effects and promoting public access to the water. Sadleir-Orme v. Seattle, SHB No. 84-41 (1985).

There is no issue in this case concerning public access. Thus, given the favored purpose of the project and our findings that

significant adverse environmental effects are unlikely, we conclude that the proposed spoils disposal project, as conditioned, is consistent with the general policy statements of the Act. RCW 90.58.020.

Moreover, nothing in the specific use preferences for shorelines of statewide significance leads us to a different conclusion. Recognizing and protecting national concerns, the homeport project goes considerably beyond service to the local interest. The natural character of the deep water disposal site will not be appreciably harmed in the long run, and the long-term integrity of the disposal operation is to be carefully monitored. At the same time, the shorelines of the East Waterway will, to some degree, be restored. The project is consistent with the preferences for shorelines of statewide significance. RCW 90.58.020.

III

Appellants argue that because no environmental designation has been made for the RADCAD site in the master program, the case should be remanded to Everett with instructions to amend the ESMP to encompass the site and, then, act anew on the permit application in light of the amendment. Welchko v. Anacortes, SHB No. 79-45 (1980) is cited as compelling such a result.

We disagree. Welchko involved a situation in which little, if any, local analysis of the Shorelines Act or the master program's

policies and regulations was apparent from the record. The matter was remanded to allow the local government to solve that deficiency.

Here conversely, the local government has subjected the project to exhaustive analysis under the adopted dredging and spoils disposal provisions of its master program, and has, in the absence of an environmental designation, subjected the project to the special rigors of conditional use criteria. The contrast with Welchko is profound, and under the facts here, we decline to remand the matter.

IV

The master program does contain detailed general use regulations and policies for "Dredging and Disposal of Spoils." ESMP, pp. IV-20 through IV-23. If these cannot be met, a dredging and disposal project cannot proceed regardless of environmental designation. These are the basic standards for receiving a substantial development permit.

We have been directed to nothing in the mandatory use regulations which would prevent permitting the Navy homeport project. However, the use regulations are preceded by a series of policy statements. The following from the list of policies has been a major focus of evidence and argument in this case:

> Depositing of dredge material in water areas should be allowed only for the improvement of habitat, or where the alternative of depositing material on land is more detrimental to the shoreline resource than depositing it in the water. (Emphasis added). ESMP, Policy #3, P. IV-21

Appellants argue that this policy should lead to the rejection of the shorelines permit here, absent a demonstration that the Smith Island alternatives are worse environmentally than use of the RADCAD site.

We are uncertain that this policy statement was intended to be mandatory in nature. Moreover, read in the context of accompanying policies and of the master program as a whole, we doubt that the statement was intended to apply to deep water dredge spoils disposal. Everett has given environmental designations only to areas landward of the line of extreme low tide. Its policies for approving spoils deposition sites refer to the spoils as "fill". We believe that the comparison the program drafters had in mind was between nearshore spoils disposal in shallow water to create dry land, and the use of truly upland sites away from the water.

However, even if the comparison to be made under Policy #3 is mandatory and even if it encompasses a comparison of the deep water RADCAD site and the Smith Island alternatives, we conclude that the permit in question does not violate the above-quoted language.

The comparison is difficult, because having found that neither alternative is likely to cause significant harm, we are faced with a comparison of relatively benign choices. Nonetheless, we hold that the choice made was correct. (See Finding of Fact XVIII.)

V

The section on "General Regulation of Uses" under the Master program contains the following:

> Activities permitted along Everett's shoreline shall conduct their operations in accordance with existing regulations regarding air and water quality. ESMP, #1, p. IV-6.

In addition, the master program list of policies on dredging and spoils disposal includes these statements:

> -Dredging and placement of dredge spoils shall be conducted in a manner which minimizes the damage to areas within the context of our shoreline resources;
>
> -Initial and maintenance dredging, and the placement of dredge spoils shall be conducted in a manner which minimizes the impact on water quality, ecological systems and natural resources. ESMP, Policies #1, #2, p. IV-21

The facts supporting the issuance of the water quality certification and related actions, (Appendix A), are sufficent to demonstrate compliance with these master program requirements.

VI

The master program provides that "shoreline uses and activities not specifically identified, and for which policies and regulations have not been developed, will be evaluated as a conditional use activity." ESMP, p. IV-1

Disposal of dredge spoils is extensively dealt with under the program, but the use of deep water sites beyond the tidelands is not

an expressly identified activity for which specific regulatory provisions have been written.

Under the facts of this case, we conclude that the Navy's proposal should be reviewed as a conditional use, but as a "named" conditional use rather than as an "unlisted" one. To act otherwise, here, would inject of high degree of unreality into the situation. Although dredge spoils disposal beyond the line of extreme low tide is not addressed in the master program, the City has already approved one permit for deep water disposal using conditional use criteria, and is processing another in the same way. That this type of use is allowable as a conditional use in the deep water area must, therefore, reasonably be said to be an ascertainable feature of Everett's shoreline master program. See RCW 90.58.140(2)(a).

VII

The master program establishes the following criteria which must be met before a conditional use permit can be issued:

1. The proposed use will not be contrary to the general intent of Everett's Master Program.

2. The proposed use will not interfere with the normal public use of public shorelines.

3. The proposed use of the site and design of the project will be compatible with other permitted uses in the area.

4. The proposed use will cause no significant adverse effects to the Shoreline environment in which it is to be located.

5. The public interest suffers no substantial detrimental effect.

No inconsistency of the proposed homeport dredging and disposal program with the general intent of the master program or with the normal public use of public shorelines has been shown.

As to compatibility with permitted uses, the lack of a specific environmental designation means that there is no adopted list of uses allowed in the area to which the proposed project can be compared. However, we have been apprised of no uses carried on in the area with which the deep water dredge spoils disposal project, as conditioned, would conflict.

The principal thrust of appellants case has been that implementing the Navy's disposal plan at the RADCAD will violate the fourth criterion concerning adverse environmental effects. Compliance with the water quality certification is a condition of the City's shorelines approval. Again in light of our findings concerning the water quality certification (Appendix A), we conclude that the shorelines approval, as conditioned, meets the environment effects standard.

In the absence of significant environmental problems, the navigational aims of the project are wholly consistent with public interest, as reflected in the policies of the SMA.

Therefore, we conclude that the Navy's homeport dredging and disposal proposal, as approved, will be consistent with the conditional use criteria of the ESMP.

VII

The Department of Ecology must approve or disapprove all locally issued shorelines conditional use permits. RCW 90.58.140(12). The department has adopted its own criteria for performing this function which are set forth in WAC 173-14-140. These criteria include those contained in the ESMP, but there are some additions. These additions include the following:

> Other uses which are not classified or set forth in the applicable master program may be authorized as conditional uses provided the applicant can demonstrate in addition to the [standard criteria], that extraordinary circumstances preclude reasonable use of the property in a manner consistent with the use regulations of the master program. WAC 173-14-140(2).

Because we conclude that the proposal at hand should be regarded as a "named" conditional use under the ascertainable master program, we hold that the above-quoted additional criterion is not applicable to this project and need not be evaluated.

VIII

The Department of Ecology's conditional use criteria also state that cumulative impacts of like requests in the area shall be considered. WAC 173-14-140(4).

We have found it probable that the instant proposal will not cause significant adverse effects. There has been no showing that if conditional use permits were granted for other similar developments in the area the total of conditional uses would produce substantial adverse affects to the shoreline environment. Moreover, there has been no showing that the confined aquatic disposal project of the Navy is anything other than sui generis.

We conclude that the shoreline conditional use permit, as conditioned, will not violate the cumulative impacts criterion.

IX

Appellants argue that the issuance of the shorelines approval to the Navy violates the requirements of the State Environmental Policy ACT (SEPA), chapter 43.21C RCW.

In light of our findings on the water quality certification (Appendix A), we conclude that this argument is without merit.

The procedural provisions of the SEPA require full disclosure of environmental consequences. Norway Hill v. King County Council, 87 Wn.2d 267, 552 P.2d 674 (1976). Governmental agencies must evaluate environmental factors and for this reason certain actions require an environmental impact statement (EIS). Eastlake Com. Coun. v. Roanoke Assoc., 82 Wn.2d 475, 513 P.2d 36 (1973). When the adequacy of an EIS is at issue, the question to be answered is whether the environmental effects of the proposed action and reasonable alternatives are

sufficiently disclosed and discussed and that they are substantiated by supportive opinion and data. Leschi v. Highway Comm'n, 84 Wn.2d 271, 525 P.2d 774 (1974).

> The mandate of SEPA does not require that every remote and speculative consequence of an action be included in the EIS. The adequacy of an EIS must be judged by application of the rule of reason.

Cheney v. Mountlake Terrace, 87 Wn.2d 338, 552 P.2d 184 (1976). We have found as a fact that the environmental documents used by the City of Everett and by Ecology in connection with its SEPA responsibilities adequately disclosed negative impacts and, therefore, we conclude that SEPA was complied with as a matter of law. (Appendix A.)

The disclosures made in the SEPA process may substantively support decisions to condition or disapprove a project. However, such disclosures, absent an extreme case evidencing abuse of discretion, do not compel any particular substantive result. The disclosures made here, including those attending the alternative of upland disposal, are far from presenting such an extreme case.

X

We are impressed by the thoroughness and high quality of the presentations of all parties to this dispute. It is a complicated matter and a highly technical one. It involves a profusion of detail in which it is difficult to avoid getting lost.

However, when all is said, we perceive the central question to be the one answered in the companion opinion on water quality issues (See Appendix A): whether capping can be done effectively over the amount of material to be covered at the proposed depths. We were convinced that existing technology is equal to the task.

We appreciate the sincerity and intelligence of those who feel the attempt here is too risky. As a matter of judgment, we simply disagree. We believe enough is now known for a fair evaluation of the risks and are persuaded that the chances of significant environmental harm are not, in fact, very large.

Indeed, all things considered, we view the Navy Homeport project, as conditioned by the Washington Department of Ecology, as an unusual and encouraging example of federal-state cooperation. Making Phase I function as a pass/fail test of capping effectiveness is a conservative approach, as well as an innovative one. Ecology has been aggressive in attempting to protect the environment of this state. The Navy has been willing to go to considerable lengths to insure that its national security aims are not pursued at the expense of that environment. This is not a government sponsored program of scientific research. It is a carefully conditional construction project. We think it is now time for the project to move forward.

XI

Any Finding of Fact which is deemed a Conclusion of Law is hereby adopted such.

From these Conclusions, the Board enters this

ORDER

The Shorelines substantial development and conditional use permit issued by the City of Everett and as approved by the Washington State Department of Ecology in connection with the United States Navy's Everett homeport project is affirmed.

DONE this 17th day of May, 1988.

SHORELINES HEARINGS BOARD

WICK DUFFORD, Presiding

LAWRENCE J. FAULK, Member

(See separate Opinion)
JUDITH A. BENDOR, Member

NANCY BURNETT, Member

(See separate Opinion)
LES ELDRIDGE, Member

(See separate Opinion)
DENNIS J. McLERRAN, Member

BEFORE THE SHORELINES HEARINGS BOARD
STATE OF WASHINGTON

FRIENDS OF THE EARTH, PILCHUCK AUDUBON SOCIETY, PORT GARDNER INFORMATION LEAGUE, PUGET SOUND ALLIANCE, SEATTLE AUDUBON SOCIETY, SIERRA CLUB, WASHINGTON ENVIRONMENTAL COUNCIL and TULALIP TRIBES OF WASHINGTON, Appellants, v. UNITED STATES NAVY, CITY OF EVERETT, and STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, Respondent.	SHB Nos. 87-31 and 87-33 FINAL FINDINGS OF FACT AND CONCLUSIONS OF LAW

These consolidated Shorelines Hearings Board ("SHB"); appeals (Nos. 87-31 and 87-33) were heard concurrently with consolidated appeals to the Pollution Control Hearings Board (Nos. 87-63 and 87-64). The SHB appeals contest select aspects of the shoreline substantial development conditional use permit issued by the City of Everett to the United States Navy (subsequently approved by the Washington State Department of Ecology ("DOE")), for a proposed

APPENDIX A

Homeport in Everett, Washington. The appeals challenge, in particular, the placement of dredged sediments, from Everett's East Waterway, into the waters of Port Gardner Bay, Puget Sound, Washington.

The combined hearings began in Everett, Washington on January 15, 1988 and continued on January 19-22, 25-29, February 10-12, 17-19 and March 7-11, 1988 in Seattle, and Lacey, Washington. Shorelines Hearings Board Members present were: Wick Dufford (Presiding), Lawrence J. Faulk, Judith A. Bendor, Les Eldridge, Nancy Burnett, and Dennis J. McLerran.

Appellants Friends of the Earth, et al., were represented by Attorney Todd D. True. Appellant Tulalip Tribes of Washington was represented by Attorney Allen H. Sanders. Respondent Washington Department of Ecology was represented by Assistant Attorneys General Charles W. Lean and Peter R. Anderson. The United States Navy was represented by Commander Thomas N. Ledvina, JAGC, and Alan P. Shapiro, Office of Counsel, Naval Facilities Engineering Command. The City of Everett was represented by Assistant City Attorney Walter Sellers.

The Board conducted a site view on January 15, 1988. Having considered the briefs, testimony, exhibits, and counsels' arguments, the Shorelines Hearings Board makes these

FINDINGS OF FACT

I

Background

The United States Navy proposes to build a Homeport facility for

an aircraft carrier battlegroup in Everett, Washington, in Port Gardner Bay, Puget Sound. The project would involve the construction of berthing and shore facilities for up to 13 ships: an aircraft carrier, frigates, cruisers, destroyers, mine countermeasure ships, both nuclear-powered and conventional craft.

The Homeport is to be built in and adjacent to the Everett East Waterway, which is part of the City's harbor, an urbanized waterfront. Industrial, municipal, and raw material wastes containing a vast array of chemicals have been deposited in the harbor over the past century through both point and non-point discharges. This has led to a creation of an odorous, sediment layer in the harbor that has been described as looking like "black mayonnaise".

To accommodate the large ships, the Navy plans to dredge 3,305,000 cubic yards ("yd^3") of bottom sediment and associated debris from the Waterway, and dispose of it at a 380-acre site in Port Gardner Bay, in water 310 to 430 feet deep (below mean lower low water), approximately 9,000 feet southwest of the East Waterway.[1] See Attachment 1, from Exh. A-3A, for locations.) This disposal site is known as RADCAD (Revised Application Deep Confined Aquatic Disposal).

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[1] Any debris longer than 10 feet, approximately 50,000 yd^3, would be disposed at an as yet unidentified upland site. Debris less than 10 feet long would be disposed with the sediments in water.

The East Waterway is within an environment designated "urban" by the Everett Shoreline Master Program ("SMP"). The RADCAD site is within a "shoreline of statewide significance" under the Shoreline Management Act, ("SMA") and is inside Everett's city limits. The City treated the Navy's application for sediment water disposal as an "unlisted" use in the SMP and required a conditional use permit; DOE concurred in this approach.

II

Marine Life

The RADCAD disposal site is near the mouth of the Snohomish River, where the fresh water of the River and the saltwater of the Sound daily meet. This creates an area of heightened biological productivity, particularly for feeding anadromous (migrating) fish, including salmon. The Snohomish River itself contributes over 20% of the fresh water flow to Puget Sound. Extensive commercial fishing, Indian tribal fishing, and recreational fishing, occurs throughout Port Gardner Bay, including the RADCAD site. Anadromous fish migrate through the area on their way to spawn in the Snohomish River, including four species of salmon, and searun steelhead, cutthroat trout and Dolly Varden. The juvenile fish out-migrate through Port Gardner, staying in shallow water. Migration occurs all year-long, but the peak adult upstream migration occurs from July through December.

Port Gardner area fish also include non-anadromous ones: herring, rockfish, flounder and sole are the principal commercial species. There are also halibut, surf perch, cod, Pacific hake, and pollack. The RADCAD site is believed to be a nursery area for hake. Shrimp are found in and near the RADCAD site primarily at water 130 to 260 feet in depth, at seasonally variable densities. Shellfish, while abundant in the Snohomish estuary and adjacent shorelines, are not currently being commercially harvested, due in part to poor water quality and interferences from other activities in the area. Shellfish harvesting is a traditional activity of the Tulalip Tribes. The open waters of the Bay also are used by a variety of birds, including diving ducks, grebes and guillemots, and by harbor seals and sea lions.[2]

III

Crabs

Dungeness crabs are found in high concentrations in Port Gardner. (See Exh. A-5, at pp. 26-31, and Exh. R-1 trawl studies.) The crabs are harvested commercially and recreationally. Very high concentrations of gravid (pregnant) egg-bearing female crabs are found at the original Navy disposal site ("CAD"), at densities never before

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[2] See, in particular, Exh. A-5, U.S. Dept. of the Interior Fish and Wildlife Service, Report on the Impacts of the Proposed Navy Homeporting Project, Everett, Washington (January 1987), for a detailed report on the area's fish and other wildlife resources.

observed in Puget Sound, leading the site to be called "Crab Condo." (Attachment 1) This concentration led the Navy to select an alternative site for sediment disposal: the current RADCAD site.

The crabs are not randomly located throughout Port Gardner, but are found in specific locations that change during the year. This change is due to different biological requirements over the year, such as food availability, breeding and procreation needs, and so forth.

The female crabs carry the egg masses on the outside of their bodies from about October-November, for three months, to about December through March. During this time they bury themselves in the sediment. The eggs hatch from about December through March, and during the larval stage are found in the sediments. About early June, as juveniles, they are found in intertidal waters.

The RADCAD site itself has a lower crab concentration than the previous CAD site. Surprisingly high concentrations of gravid females are found at 260 feet water depths, buried in the bottom sediments, at depths where crabs were previously thought not to inhabit. (Gravid females were also found at depths up to 328 feet.) Why the pregnant crabs bury in the sediments is not currently well understood. While buried they are relatively immobile. Male crabs have been observed to be able to dig out from under 6 inches of sediment. The buried female crab's ability to dig out, if artificially buried by more sediments, has not been studied.

RADCAD is closely surrounded on two and a half sides by high concentrations of crabs. (See Attachment 2, from Exh. R-1, June 1987 Cruise Report, Fig. 4.) There are the very high concentrations of gravid females also within these 1,000 feet. The nearby female crab population appears highest during June.

It is estimated that 800 on-site adult crabs will be killed directly from the Homeport sediment being dumped on top of them. Larval and juvenile crab will also be impacted. Mortality will also result from respiration, ingestion, and by absorption of contaminated sediments through the soft tissue. Even clean sediments will cause mortality due to respiratory problems and secondary infections. The amount of such mortality depends upon the amount of sediment mass loss, whether an area larger than just the RADCAD site is impacted, the amount of contaminated sediment exposed, how long it remains exposed, and so forth.

Suitable crab habitat is dependent upon many factors, including the availability of food, the proper sediment grain size and composition, the existence of non-toxic sediments, and so forth. Loss of habitat can even more critically affect crab population long-term than outright impact mortality. Displaced crabs (and other marine species) which have lost habitat do not simply "move over" to another location. That "other location" is already maximized for the particular species, i.e. at its <u>biological carrying capacity</u>. Therefore, loss of habitat long-term means of population loss, absent mitigation by the creation of new habitat.

The magnitude of such population loss will critically depend upon the care exercised during the disposal operation, and in particular whether sediments deposited unconfined are truly clean, whether contaminated toxic sediments are effectively isolated from the aquatic environment, and whether sediments are deposited off-site in significant volumes or depths.

IV

The Navy plans to dispose of 3,305,000 yd^3 of East Waterway sediments during two years of dredging. In comparison, in all of Puget Sound over 15 years (1970 to 1985), only 6,800,000 yd^3 of dredged materials have been disposed unconfined in open-water, or 450,000 yd^3 annually. Homeport's 3,300,000 yd^3 is equal to 1 2/3 World Trade Center Towers (New York City) in volume. The contaminated sediments (identified to-date) alone equal 1/2 a Tower. Clearly, the Homeport sediment disposal operation is massive in scale.

V

Berm Stage

Beginning in 1988, the Navy plans to clamshell dredge 500,000 yd^3 of "clean" material primarily from the outer harbor. A five yd^3 capacity clamshell dredge will be used, with a dredging tolerance (accuracy) of one foot in depth. The material will be transported in 4,000 yd^3 capacity barges to the RADCAD site. There the barges will be positioned through use of advanced navigational equipment, over the Berm location within the site. (See Attachment 3;

this RADCAD site diagram is from Exh. A-11, the Final Monitoring Report, is also referenced in the Shoreline water permit's pass/fail criteria, and was part of the water quality certification's public notice. All disposal boundary references hereafter, are to this permit diagram.)

Once the barge is properly positioned, the bottom will be opened and the sediments released, to fall through 310 feet to 430 feet of water to the bottom of Port Gardner Bay. It is estimated one barge dump will cover 20 acres of Bay bottom.

This Berm stage has three main purposes:

1. to provide a learning experience for the Navy and its contractors in using the sophisticated navigational equipment to accurately position the barges, and in tracking and monitoring the sediment plume;

2. to provide, by removing 500,000 yd^3 from the total sediments needed to be dredged, a more uniform ratio of "clean" to contaminated sediments remaining in the East Waterway for the subsequent Phase I stage. In that way the Phase I capping could be a more accurate test for Phase II in terms of "clean"/contaminated sediment ratio; and

3. to provide a barrier berm to help lessen the lateral spread of dumped sediments during Phases I and II disposal.

The current shoreline permit does not have any performance

pass/fail criteria governing the Berm stage. After the Berm stage, Phase I disposal would be allowed to proceed, unless no discernible berm whatsoever is detected.[3]

VI

The Shoreline permit requires that the Phase I operation meet the following pass/fail criteria:

1. Significant thickness of cap material shall not exceed the second year construction boundaries or the easterly -340 foot contour line as shown in the referenced public notice. [E.g., Attachment 3] Significant thickness of dredged material shall be considered as > [i.e., more than] 6 inches. This criteria is exclusive of an accident or mechanical failure of the hydraulic pipeline system offsite.

2. All contaminated material > 3 cm thick shall be covered with cap (native) material. However, it shall be demonstrated that 95 percent of the contaminated material 3 cm thick is covered with a minimum of one meter (3.28 feet) of cap (native) material. (If contaminated material cannot be visually distinguished from native material the contaminated material shall be determined as material with a chemical concentration above the Maximum Level One [ML 1] as defined in the Puget Sound Dredge Disposal Analysis Technical Appendix - Evaluation Procedures Preliminary Draft (November 5, 1986) and subsequent drafts and final documents.)

3. No contaminated material > 3 cm thick shall be found 500' [feet] outside of the first years boundaries for contaminated material or outside of the second year construction boundaries, whichever is less.

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[3] DOE conceded that this does not constitute a pass/fail criterion.

4. Approval of the boundaries for the second years disposal shall also be contingent upon a demonstration, based on two years data, that adult female crabs within the second year boundaries of the proposed disposal site have a mean annual density of less than 100 female adult crabs per hectare [4 acres] and such crabs are less than 5 percent of the total female adult crabs within the area bounded by 48.0 degrees north latitude and 122 degress 17.5 minutes west longitude, the 110 meter [approx. 363 feet] depth contour and the MLLW mark, and the disposal site greater than 110 meters deep. [Exh. A-6; Water Quality Certification incorporated as Shoreline Permit condition.]

Criterion 4 has already been met, so the second year boundaries are as shown in the RADCAD site diagram (Attachment 3).

VII

Phase I Contaminated Disposal

Dredging and disposal of contaminated sediments will only occur from July 16 to November 30 of each year.

Following the Berm stage, approximately 97,000 yd^3 of contaminated sediments from the outer to middle harbor areas will be dredged by clamshell. An estimated 2% mass loss of contaminated sediments will occur during dredging. This dredging method was chosen, in part, to help maintain the "black mayonnaise" sediments' structural strength/cohesion. (These contaminated sediments already have a high water content.) Promoting structural cohesion will help keep the contaminated sediments together, once dumped, as the sediment plume descends through the water column. Moreover, promoting cohesion will make the subsequent capping operation more feasible, when "clean" sediments are dispersed on top to form a cap.

The Phase I contaminated dredging will be done to at least one foot below the previously visually-identified "black mayonnaise" layer. This one foot below "overdredging" is designed, in part, to try and ensure that all contaminated sediments are removed. If, however, the contractors dredge more than two feet below that visual line, they will be financially penalized. So "overdredging" beyond a certain point is actively discouraged.[4] Within the clamshell bucket, the "black mayonnaise" layer will be mixed with the gray native sediments. No overflowing of the barge will be allowed.

The contaminated Phase I sediments will be transported to RADCAD by barge, the barge positioned over RADCAD's Phase I contaminated boundary (Attachment 3), and the sediments released to descend through the water. During the descent, due to winds, currents and other physical forces, up to 3% of the contaminated sediments (by volume) will be lost, for an estimated total contaminated sediment mass loss of 5%. Finer sediments, which are more vulnerable to transport, will be lost at higher percentages. This 5% mass loss figure, while used throughout the EIS documents and during the hearing, has not been incorporated as a permit pass/fail criterion.

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4 Even with "precision dredging, however, a 5 yd^3 clamshell bucket only has a one-foot accuracy tolerance (range). So this overdredging is also necessiatated by the equipment's limitations.

The descending plume will hit the Bay bottom and surge laterally, with the heavier debris staying in the the center of the dump. It has been predicted that successive barge dumps will form a contaminated mound.

Under the shoreline permit criteria (Finding of Fact VI, above) contaminated sediments less than 3 cm. (approximately 1.2 inches) in depth, regardless of where located, on or off-site, will not have to be capped. For thicknesses greater than 3 cm., 5% of these contaminated sediments are also not required to be capped.

VIII

Capping of Phase I

Capping of Phase I contaminated sediment is to be completed by January 14, 1989. Approximately 239,000 yd^3 of "clean" sediments will be hydraulically dredged (by suction) from the outer and middle harbor areas. The sediments, in a liquified slurry form, will be sent by pipeline 9,000 feet to the RADCAD site. There, by a 50-foot submerged pipe with diffusers, the sediments will be released under pressure (referred to as a "jet" of material) over the Phase I first year construction boundary (Attachment 3). The pipe will be moving in a predetermined path, with repeated passes over the first year area, to provide a minimum of one meter of "clean" cap over the contaminated Phase I sediments. Cap consolidation, i.e. loss of height and width after placement due to compaction, was conservatively estimated by the Corps to be up to 50%.

Mass losses of these "clean" sediments into the aquatic environment when dispersed into 265 feet of water, will range from 3.2% to 26.3%, depending upon the "jet" discharge rate chosen. (Exh. A-2B, Navy Draft Supplemental EIS Vol. 1 Technical Appendices, Palermo, et al., Evaluation of Dredged Material Disposal . . . (May 1986).) The mass losses of cap material will be higher at RADCAD, since that site is 45 to 165 feet deeper than the 265 feet used by the Corps.

The shoreline permit criteria do not place any restrictions on cap mass losses during any phase.

If the Phase I pass/criteria are not met, then by this permit the Navy could not proceed to Phase II disposal, and would then have to dispose of the remaining East Waterway sediments at an as yet not identified upland site.

IX

Monitoring

During and after Phase I, the Navy will have in-water (in situ) monitoring conducted to determine compliance with the given permit pass/fail criteria (Finding of Fact VI, above).

The monitoring will also include biological monitoring. This in-situ biological monitoring, however, is not a permit pass/fail criterion. The reason for this is clear. We find that this biological monitoring will not able to detect any but the most catastrophic environmental damage caused by the disposal. In

recognition of this limitation, the DOE has relied, instead, on placement pass/fail numerical criteria. We do find, however, that the biological monitoring between Phases I and II is likely to provide useful information, separate from information for decisions related to this permit.

Phase II

If the Navy demonstrates compliance with the permit's pass/fail criteria, DOE will authorize it to proceed to Phase II.

Phase II disposal involves a much greater volume of sediment, at least 2,469,000 yd^3 from the harbor, and more if additional clean cap material is needed. 831,000 yd^3 of "contaminated" sediment will be clamshell dredged from the inner harbor, and barge-dumped over the RADCAD second year contaminated boundary area (Attach. 3). Within the same year, 1,638,000 yd^3 of "clean" material will be hydraulically dredged, sent as a slurry by pipeline, and released over the second year construction boundary to form a cap over the contaminated sediments.

There are no Phase II pass/fail permit criteria. Evidence shows, however, that DOE still requires 95% of Phase II contaminated material greater than 3 cm. to be covered with a one meter cap.

If there is not sufficient clean cap material available from the East Waterway dredging, the Navy plans to obtain additional sediment from ongoing dredge maintenance operations, including ones in the Snohomish River. If this were done, total sediment disposal at RADCAD would be greater than 3,305,000 yd^3.

X

Disposal: Currents, Wind and Sediment Transport

The RADCAD 380-acre site extends approximately 6,000 feet east-west, and 3,800 feet north-south. Over time Snohomish River sediments have been deposited in the area. The site has an average slope of 2%. (The area for Phase I contaminated dumping has a slightly steeper slope.) RADCAD is downslope from both the CAD site to the east and areas to the south, both of which have high crab populations. It is in part at an equal elevation with high crab populations to the northeast (Attach. 3).

Average bottom currents in the area, tested over a 31 day period, are 3.5 cm. (instantaneous) with a maximum 18 cm. observed. Surface currents are higher. Once sediments have been deposited on the Bay bottom, such currents are unlikely to cause significant sediment re-suspension or mound erosion. While the sediments are falling through the water column (in the "plume" or "jet"), however, the observed currents, winds, and other physical forces are sufficient to move sediments off-boundary areas (Attach. 3). This is particularly true when disposal occurs near a particular boundary. Moreover, fine sediments are more easily transported and will be transported outside particular boundaries at a higher percentage rate than predicted for the average overall sediments. These finer sediments have higher organic chemical concentrations.

XI

Everett dredged sediments are a complex mixture of materials deposited from industrial activities and sediments from the Snohomish River. Industrial discharges have included effluent from pulp and papermill operations, urban runoff, and other activities associated with a heavily urbanized setting. Chemicals including both organic and inorganic ones, polyaromatic hydrocarbons ("PAHS"; both low and high molecular weight), polychlorinated biphenols ("PCBs"), metals, in sum a complex chemical soup. In 1984, English sole, a bottom fish which inhabits the East Waterway, were found to have liver cancers. It is uncontroverted that East Waterway surface sediments are toxic to the aquatic life. (See Exh. A-16M, Puget Sound Dredged Disposal Analysis ("PSDDA"), Draft Technical Appendix, (January 1988), at pp. II-37, II-40, etc.; Exh. A-18, Malins, et al. Chemical Pollutants in Sediments and Diseases of Bottom-Dwelling Fish in Puget Sound, Washington, 18 Environ. Sci. Technol. 9 (1984) and so forth.)

XII

It is well-recognized that to control pollution from disposing dredged sediments in the water, those sediments with significant concentrations of toxic chemicals have to be controlled. Chemicals in exposed sediments interact with the aquatic environment in a number of ways. If the sediments become aerobic (with oxygen) and turn acidic, metals can dissolve into the water. Chemicals which are not water-soluble, such as PAHS and PCBs, adhere to fine grain

organically-rich sediments, such as those found in the East Waterway. The sediment organic chemical concentrations may be thousands of times higher than the concentrations detectable in the water column itself. Water column tests alone (i.e., elutriate tests) are not adequate to measure such toxic chemical concentrations in sediments. (See, e.g., EPA Guidelines for Specification of Disposal Sites for Dredged or Fill Material, 40 CFR Pt. 230.61, 45 F.R. 85336 (December 24, 1980).) Rather, a combination of sediment analytical chemistry tests, and biological tests are needed. Id. Since 1984 oyster larvae and amphipod biological tests have been used in a regulatory manner in Puget Sound on sediments. (See Finding XV, below.) Since 1985 the microtox luminescence sediment test has been available and has been used on sediments. All these biological tests, as well as bioaccumulation tests, have been used in this project.

XIII

There are a variety of pathways for marine life to take in such chemically-laden sediments. Organisms that live in the sediments, such as benthic organisms, may ingest the sediments or absorb them through their body. Other species may eat these bottom-dwellers or take in their wastes. The chemical concentrations may increase ("bioaccumulate") up the food chain. Filter feeders such as clams and mussels may also concentrate chemicals. Fish are somewhat more efficient than crustacea (including crabs) and shellfish at metabolizing PAHs, transforming them into other compounds. However,

some metabolites formed from these chemical breakdowns have been demonstrated to have chronic toxic effects (DNA alteration) on fish, and may be even more toxic to the fish than the original chemical.

XIV

The key question then is, which Everett sediments have chemical concentrations at levels that will not be toxic to marine life and can therefore be disposed of as "Clean", and which sediments if disposed in Port Gardner will have to be confined and isolated from the aquatic environment, i.e., are "Contaminated".

There is no dispute that the surface "black mayonnaise" sediment layer in the Harbor is contaminated. The harbor marine life reflects this, e.g., the benthic population level is depressed, and those benthos that exist are pollutant-resistant. Few bottom fish are found, and the English sole have liver tumors. The Navy is required to treat this entire black mayonnaise layer and one foot below it as contaminated. (The preceding Phases I and II contaminated sediment volumes, i.e. 97,000 yd^3 and 800,000 yd^3 reflect this requirement.)

But more than 2,375,000 yd^3 of sediment will be dumped during all three stages, Berm and capping Phases I and II, into Port Gardner's open-water and remain unconfined. Therefore, it is critical that this massive volume of material be, in fact, Clean, and not have chemical concentrations likely to cause acute or chronic long-term toxicity to marine life. Because over 1,977,000 yd^3 of this will be

disposed of hydraulically, where mass sediment loss rates are as high as 26%, assuring "clean" is Clean is even more critical. (See Finding VIII, above.)

XV

Aware that sediments were contaminated, the Navy, in conjunction with the Corps, undertook to determine the dividing line between contaminated sediments and those sufficiently clean to be disposed unconfined. (This distinguishing process will be referred to as "sediment characterization".) In 1985 through 1986, the Navy had chemical and biological tests done, referred to as Phases 1, 2 and 3 (no correlation to the dredge phases; see Finding XVII, below).

XVI

Before describing the Navy's efforts, some brief background is necessary.

Puget Sound Sediment Characterization Efforts in the 1980s:

Fourmile Rock

In October 1982 the City of Seattle established an interagency task force to review the problem of disposing of contaminated dredged sediments. (See generally, SHB No. 84-41, Bonnie Sadleir-Orme v. City of Seattle, et al.) The task force included a broad array of governmental agencies, including the City of Seattle, DOE, the United States Environmental Protection Agency, the Corps, and the National Oceanographic and Atmospheric Administration. As a result, interim sediment criteria to prevent further degradation of the already

contaminated Fourmile Rock site were developed. These criteria became a part of the Fourmile Rock shoreline permit's conditions, as issued in June 1984. See, Sadleir-Orme, supra. The permit was for a maximum of two years, during which time unconfined sediment disposal from many different dredge sites would be allowed to continue. (Exhs. A-24, and A-16M at pp. II-12 through II-16) The criteria were not based on preventing a clean site from being adversely environmentally affected.

The 1984 Fourmile Rock criteria required that sediment cores be collected from the dredge sites, tested for physical and chemical properties, and if necessary tested biologically. Sampling and testing plans were required for each dredge area for specified chemicals and groups of chemicals. (See Attachment 4 for the chemicals and their concentration limits.) The criteria required more extensive sediment chemical and biological tests for sediments from dredge sites of high concern (e.g. Duwamish River, Elliott Bay waterfront, etc.), than for low concern areas. Amphipod bioassay and oyster larvae bioassay were required for sediments from high and moderate concern areas. The criteria further required that if, during bioassay testing, control group mortality was greater than 10%, or if oyster larvae control group abnormality was greater than 10%, the bioassay had to be repeated.

For each sediment chemical core test done:

1. if all listed pollutants were less than 110% of disposal site background levels, in-water [unconfined] disposal was allowed;

2. if one or two listed pollutants were at levels from 110% to 125%, in-water disposal was allowed only if bioassay criteria were met;

3. if any three or more pollutants exceeded 110%, no in-water disposal was allowed; and

4. if any listed pollutant or groups of pollutant exceeded 125%, no in-water disposal was allowed. (Exh. A-16M)

The Fourmile Rock site was used for dumping and then closed in June 1987.

Port Gardner and PSDDA:

The Port Gardner interim criteria for unconfined sediment disposal were developed in 1985, and were transmitted in final form to the City of Everett in February 1986. (Exh. A-16M, at pp. II-17 and II-18.) These criteria were also based on preventing further degradation at an existing dump site. The chemical concentration "cut-offs" were more restrictive than the Fourmile Rock Criteria. (Attachment 4)

In February 1985 the Puget Sound Dredged Disposal Analysis project ("PSDDA") began. The Corps is the lead federal agency joined by EPA, and the Washington Department of Natural Resources ("DNR") is lead for the State of Washington joined by DOE. The objectives of PSDDA, using an extensive existing Puget Sound data base, are to:

1. establish sediment evaluation procedures so that materials suitable for open-water unconfined disposal are properly identified; and

2. identify open-water sites in Puget Sound suitable for receiving such sediments. (Exh. A-16M)

DOE has incorporated PSDAA criteria in the permit's pass/fail criteria. (See Finding VI, above). As of the hearing date, the criteria have not otherwise been adopted as final.

Like the previous 1984 Fourmile Rock criteria, PSDDA uses a two-tiered approach. Chemical levels are based upon apparent biological effects threshold ("AET"). If all chemical concentrations are below the screening level ("SL"), then disposal has been shown to not cause sublethal toxicity, the sediments are "Clean", and are safe for unconfined disposal.[5] If concentrations are between SL and "ML-2", sediments are "Clean" only if they subsequently pass specified biological tests. If the concentration is greater than ML-2 the material cannot be disposed in water unconfined, as apparent biological effects will occur (in all biological indicators). (See Exh. A-16M, at pp. ES 14-15, Sections II. 7-2 and .8-2; also Attach. 4.)

In characterizing sediments, PSDDA uses the "dredge units" approach which is "routinely employed in the design of capping projects, . . . " (Exh. A-16M, at II-46). Several core samples are taken within that volumetric unit, are composited and chemical testing

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[5] For some chemicals, the 1986 Port Gardner interim criteria levels are more restrictive than PSDDA SL 1 screeening levels. (See Attach 4)

is done on the composite. The PSDDA dredge unit size depends on the sediment area's "rank", i.e. high versus less contamination, and the sediments' depth below surface sediments.[6]

XVI

Navy Phase 1 Sediment Characterization

In late 1984 the Navy had 19 sediment core samples taken in the Everett harbor at varying depths. (These are known as the "E" series; see Exhs. A-16F and R-19.) Using visual means to distinguish between the black mayonnaise and the gray native sediments, the 19 core samples were divided into top and bottom samples. (E-4 and E-13 also divided into a middle sample.) The discrete samples were then tested chemically for: seven metals, some low and high molecular weight PAHs, ethylbenzene, total xylene, and total PCBs.

But there are serious significant data gaps in the Navy's testing. The cores were not tested for other organic compounds, including numerous ones with known toxic properties, including: chlorinated hydrocarbons, volatile organics, phenols, and phthalates. (Exh. A-16M) (Since only some PAHs were tested for, the weights

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[6] For example, in areas with a low-moderate rank (i.e., available data indicates few or no sources of chemicals of concern likely to cause significant biological concern, but data insufficient to so affirm), sediments four feet below surface are to be tested in 48,000 yd^3 units. Sediments with a moderate rank (i.e. data incomplete but some chemicals of concern nearby), those below four feet are to be tested in 24,000 yd^3 dredge units.

ascribed to the total PAH groups are likely to be underestimated.) In addition, the visual methods used to divide contaminated from supposedly clean samples are scientifically insupportable. The "E series" chemical results, and subsequent Phases 2 and 3 testing show the error of assuming that contamination is only to be found in the this visually distinguishable black mayonnaise layer. (See Findings XVIII and XIX, below)

The Phase 1 chemical analytical tests showed that contamination levels in some areas of the harbor increased, rather than decreased, with sediment depth. (This confirmed a 1984 Corps study.) Supposedly "clean" native bottom samples exceeded Puget Sound surface sediment background levels for cadmium and copper. Six inner harbor bottom samples (2B, 3B, 5B, 6B, 8B and 9B i.e. Phase II dredging) showed significantly elevated chemical levels.[7] Since core samples have not been taken and chemically tested at depths below these respective bottom samples it is not now known at what depths clean sediments will be found. The tests also show that sediment contamination thickness and depth varies; there was testimony that

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[7] Two middle samples showed PAH levels exceeding surface levels, and in one instance exceeded PSDDA SL screening levels by 70 times. For the bottom core samples, 3 exceeded Port Gardner criteria for low molecular weight PAH (3B, 6B and 8B), 4 exceeded SL for low molecular weight PAH (2B, 3B, 6B and 8B), 2 exceeded SL for high molecular weight PAH (2B, 3B, with 9B very close), 4 exceeded SL for napthalene (3B, 5B, 6B, 8B), and so forth.

there was considerable contaminant depth difference from as little as 33 feet away.[8] The proposed overdredging, which goes only 1 foot below the black mayonnaise, clearly does not assure that all contaminated sediments will be removed, or that we can determine what chemical concentrations will be present in the remaining "clean" sediments.

XVIII

Phase 2 Tests

The Navy's own work acknowledged the Phase 1 chemical testing deficiencies. As a result, the Navy required biological testing to demonstrate that the bottom sediments were clean. But the subsequent biological tests (Phase 2, toxicity for amphipods, bioaccumulation in clams and mussels) did nothing of the kind. To the contrary, amphipod mortality and PAH bioaccumulation were high.

The Navy and Corps had 20 more sediment core samples taken in the harbor in 1985. (In so sampling, they attempted to come within 100 feet of the Phase 1 "E series" core sample locations.) Again, using visual methods, the core samples were divided into the black mayonnaise layer and the native sediment layer. From the 20 "native" bottom samples, six composites were made. (Exh. R-20, Fig. 1; Exh. A-16F.) These composites are referred to as the "EEW series".

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[8] This is not altogether surprising, since parts of the harbor were dredged as recently as 1978, and industrial wastes are not necessarily deposited uniformly throughout the area. Moreover, different chemicals have different vertical leaching rates (i.e. the rate of movement through sediments over time).

Bioaccumulation studies were done with two filter feeders: Macoma clams and Mytillus mussels. The tests were run for up to 21 days, and the PAH and PCB accumulation levels were compared to results using Puget Sound background sediments and to results using "clean" Sequim sediments (known as the "control group"). The results showed significant chemical accumulation levels from the Everett bottom "clean" sediments, with a PAH level in one instance 16 times the level found in the control group.

Amphipod bioassay tests were also conducted, with control groups exposed to Sequim Bay sediments. The amphipod testing, however, ran into a number of difficulties. Most critically, the control group's average survival rate was very low in one series, i.e. 63%. A second control group of amphipods were tested, with amphipods taken from an entirely different location, making valid scientific comparisons questionable. The survival rates between the two control groups tests varied by 19%. (As one witness said: "No amount of flawed data makes good data".) The amphipod survival rate in the Everett composite "native clean" sediments was as low as 60%.[9] Behavioral observation also indicated the amphipods were trying to avoid staying in the Everett sediments, a sign of possible sediment contamination or other composition problem.

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[9] Composites EEW 1 (cores E1 and E4), EEW 5 (cores E12, E14, E15 and E16), and EEW 6 (cores E17, E18, E19 and E20) were particularly problematic (see Exh. R-20, at Fig. 1, Table 10, and Table 12.

At that point, either more biological testing was necessary, or the sediments should have been treated as contaminated, i.e. not acceptable for unconfined disposal. Neither of these sensible alternatives was chosen, despite cogent, informed resource agencys' concerns.

The proposed overdredging does not solve the deficiences in sediment characterization. The composited bottom samples, taken from areas below the "overdredge" line, show criteria and screening levels are exceeded. Moreover, the "dredge units" tested were far too large. The chemical testing had one test per 130,000 yd^3 (e.g., 19 analyses for 2,477,000 yd^3 of "clean" sediment). The biological testing was done at one composited sample test per 412,800 yd^3 (e.g., 6 composites for 2,477,000 yd^3).

We find that the tests did not prove the native bottom sediments to be clean. To the contrary, we find from all the evidence that more probable than not, some of the bottom native sediments will have at least a chronic toxic effect if disposed unconfined in Port Gardner Bay. We find that further sediment characterization is necessary to determine which bottom sediments are clean (suitable for unconfined disposal) and that such characterization is feasible.

XIX

Phase 3 Testing

In May 1986 the Corps made an additional effort to characterize the East Waterway sediments, to demonstrate that the gray native

sediments were clean. (Exh. R-21) A clamshell took an 8 yd^3 "grab" sample. Biological tests were done. The oyster larvae bioassays showed statistically significant level of abnormalities. A geoduck bioassay test showed complete acute toxicity, i.e. no survivors. (This test is still in the experimental stage.) Microtox testing showed three times higher toxicity levels than with Sequim Bay sediments. (It was conjectured at the hearing, but not supported by evidence, that the grab sample was somehow inadvertently contaminated by "black mayonnaise sediments".) The native sediment sample, taken outside the Homeport area to be dredged, did show toxicity and further proves the invalidity of using visual methods to distinguish "clean" from contaminated sediments.

XX

Experimental Disposal

The Navy's confined water disposal is experimental in significant ways.

Field Data

To predict the mound formation and capping, field data primarily from operations on the East Coast were used. Mounds have been formed from barge-dumping in waters up to 210 feet deep. Barge-dump capping has been done in depths up to 70 feet. Hydraulic placement of a cap has never been done in the field at any depth.

In particular, evidence showed that at the Foul Area Site (off Boston), a mound was attempted to be formed in water 160 to 300 feet

deep. Sophisticated bathymetry depth sounding equipment initially could not even locate the barge-dumped sediment. Subsequently, an advanced underwater camera (similar to one planned for use during the Homeport monitoring) discovered, instead, a "flat pancake" 3,630 feet in diameter. Subsequent review revealed that the barge dumping had not been done with the specified required precision.

Barge-dumping formed a mound and a cap in 70 feet of water in Long Island Sound.

At a Portland, Maine site, a discrete mound was formed in water 140 to 225 feet. No capping was attempted.

Recent efforts to accurately predict a sediment barge-dump in the Duwamish River (Puget Sound) were not particularly successful. One barge-load (1,100 yd^3 of contaminated sediments) was dumped into 70 feet of water. Subsequent monitoring revealed that substantial amounts of sediment surged out of the target area.

XXI

Computer and Laboratory Data on Disposal

The Corps developed a computer model to simulate a single barge dump, to determine if a mound could be formed at depths of 265 feet (the original CAD site depths), and to calculate the sediment mass losses. (When the RADCAD site was subsequently selected, the results were mathematically adjusted for the greater 310 to 430 depths.) The model has never been field-tested, i.e. it has not been used to predict an event and then verified by subsequent in-field events.

From the single-dump model, and the field data, the Corps concluded that a mound could be formed and capped at the RADCAD site. We conclude appellants have not proven RADCAD disposal will fail, but they have proven that the disposal is experimental.

XXII

Bioturbation and Cap Integrity

A sediment cap's integrity, its' ability to effectively isolate contaminated materials from the aquatic environment, depends upon several factors: that the cap material is clean; that it be sufficiently thick and not be significantly eroded, and that it not be compromised by burrowing organisms. (Organisms turning over and moving sediment will be referred to here as bioturbation.)

The Corps did laboratory tests in an effort to determine how much cap was necessary. East coast polycheates (a type of sea-worm), breached a 50 cm. cap during a 40-day test. The Corps recommended, after considering the possible presence of geoduck at RADCAD, which are known to bury at last 50 cm., that a minimum 80 cm. cap was needed. (Exh. A-2B, Palermo, supra, (May 1986), at pp 24-25.) The Corps also conceded that additional cap beyond the 80 cm. may be necessary to compensate for erosion, consolidation or incorporation of the cap into the underlying (previously placed) contaminated sediments. Id.

Two marine organisms capable of significant burrowing have been found at the RADCAD site: a sea cucumber (Molpadia), and a shrimp

(Axiopsis Spinulicauda). The burrowing shrimp has been found buried in sediment up to 80 cm. in depth. A very close relative of this shrimp, Axiiopsis Seratus, found in the tropics, is known to burrow more than 3 meters.

Based on all the evidence, we find that erosion and bioturbation are not likely to pose significant threats to the integrity of a one-meter consolidated cap. However, we also find that a one-meter unconsolidated cap is not adequate to isolate contaminants from the aquatic environment. Such cap, after consolidation, may be as little as 50 cm. (1/2 a meter) in height, less than the Puget Sound shrimp's known burrowing depth.

XXIII

Given the evidence and burden of proof in these appeals, the Navy is likely to be able to dispose of the sediments within the sites as identified (Attach. 3). Nonetheless, the disposal operation is experimental; it has not been field-verified. The shoreline permit, we further find does not provide sufficient operational pass/fail placement criteria to ensure that the disposal will not cause significant chronic long-term or acute toxicity to marine life in and around the site area.

Permit Pass/Fail Placement Deficiencies

During Phase I, contaminated sediments up to 3 cm. thick will be allowed up to 500 feet beyond the Phase I contaminated boundaries or the Phase II overall boundary. (Finding VI, above) There is no

pass/fail limits on the total amount of contaminated sediments less than 3 cm. that can be outside any boundary limits, and such sediments will not be required to be covered with clean material. An additional 5% of contaminated sediments that are greater than 3 cm. in thickness are not required to be covered with clean cap.

During Phase I capping material greater than 6 inches (approximately 15 cm.) will be allowed up to the second year Phase II boundaries (or the easterly -340 foot contour.) There are no placement limits for cap material less than 6 inches thick, nor any total volumetric cap mass loss restrictions. Given the proximity of high concentrations of crabs, high volumes of even truly clean sediments can smother adult and juvenile crabs, damage eggs, abrade tissues causing mortality or loss of reproductive capacity, destroy habitat, and otherwise damage the aquatic environment. Therefore, accurate hydraulic cap placement, a technique that has never been used before, must be timely tested in the field, and mass loss limits required. This is particularly important before Phase II disposal begins with its disposal of 800,000 yd^3 of already identified contaminated sediments.

There are no pass/fail boundary or mass loss restrictive criteria whatsoever for Phase II placement, when these 800,000 yd^3 of admittedly contaminated Phase II material will be dumped, and minimum of 1,600,000 yd^3 "clean" cap will be hydraulically released with potential high mass loss rates.

Alternative Site - Smith Island

The Navy has analyzed Smith Island as a possible alternative sediment disposal site. Appellants have advocated the use of this site. This upland site is four miles from the East Waterway, adjacent to Steamboat Slough which is in the Snohomish River Estuary. The site is approximately 110 acres, the eastern portion in pasture, the western part a former log storage and sorting yard. The site is diked and separated from the Slough. It is, however, within the 100-year floodplain of the Snohomish River. In portions of the site, the soils are soft, peaty, and somewhat impermeable.

To use this site, the East Waterway sediments would likely be hydraulically dredged and conveyed as a slurry by pipeline. Known, proven engineering technology would be used on-site. First, the slurry would be allowed to settle. The separated-out water would then be placed back in the Sound. Estimated mass losses of sediments back to the Sound from these waters are 5%. With the use of chemical flocculants, this mass loss can be further reduced.

Two designs have been proposed, excavated and elevated. Both designs would require capping and perimeter dikes, but the elevated design's dikes would have to be higher. The excavated design would retain the wet sediments in an anaerobic (oxygen-less) state, preventing the mobilization of metals. But the sediments would be in direct continuity with the groundwater. The groundwater has a low hydraulic gradient and is brackish, not used for drinking water.

The elevated design would likely require the use of a liner, either clay or synthetic (or both in combination). Given the possibility of differential soil settling, a clay liner is more likely to retain its structural integrity, not tear. A leak detection system can be installed. The sediments in an elevated design, are more likely to become aerobic and can release metals into the water which remains in the sediment. This water, known as leachate, could be intercepted and the metals inexpensively removed, prior to the leachate's entering the ground water. The methods for controlling such possible groundwater pollution are known and feasible. We further find that the Smith Island disposal alternative overall involves known, proven technology that is state of the art. Upland disposal of sediments is clearly contemplated by the Everett Shoreline Master Program. (SMP Policy No. 5, see Conclusion of Law VIII, below.)

But the Snohomish River is the spawning area for four types of salmon, and steelhead and other searun trout. The downstream River's mouth and Port Gardner Bay estuary provide vital habitat for out-migrating juveniles while they adjust to salt water conditions. Given the site's location in a 100 year floodplain, adjacent to the Snohomish River estuary, disposing of high volumes of contaminated sediments presents some environmental risks. We find that the risks

are of a severity equal to those from using the RADCAD site, if RADCAD disposal is further conditioned as recommended in this Opinion.[10]

We further find that the Smith Island alternative more probably than not, poses less environmental risk than the RADCAD disposal, if RADCAD disposal proceeds without further conditions. In so finding, we are aware that if RADCAD disposal operation does not work, and the extant pass/fail criteria do not timely detect the problems, massive amounts of contaminated sediments will be under 310 to 430 feet of water, with the only remediation possible would be capping, which would have already failed. While such exposed contaminated toxic sediments might be physically "out of human sight", they would be in direct contact with Puget Sound marine aquatic life.

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[10] We find that sea surface microlayer research is in the early stages of development. The evidence presented to the Board is not sufficiently definite for the Board to reach any firm conclusions about microlayer environmental effects.

Any Conclusion of Law which is deemed a Finding of Fact is hereby adopted as such.

From these Findings, the Board comes to these

CONCLUSIONS OF LAW

I

We review de novo the substantial development conditional use permit for consistency with the Shoreline Management Act ("SMA") Chpt. 90.48 RCW, the City of Everett Shoreline Master Program ("SMP"), and the State Environmental Policy Act ("SEPA") Chpt. 43.21C RCW, and implementing regulations. These SHB appeals are complex, and the counsels' cogent presentations are greatly appreciated.

II

The key issue for this Board is whether dredged sediment disposal can occur at the proposed RADCAD site in conformance with the Shoreline Management Act ("SMA") and the Everett Shoreline Master Program ("SMP"). We conclude that the answer is "Yes", but only if the shoreline permit is further conditioned to provide adequate safeguards, so that: "clean" material is truly clean, the massive volumes of sediments are placed within those boundaries permittee Navy has previously identified, that if such accurate placement does not occur as predicted there are sufficient timely pass/fail criteria to detect this, and that any contaminated materials will in fact be isolated from the aquatic environment. We further conclude that such additional permit pass/fail criteria are feasible.

III

The Board's pre-eminent responsibility is to give effect to the intent and purpose of the Legislature as expressed in statute. In re Marriage of Timmons, 94 Wn.2d 594, 600, 617 P.2d 1032, (1980). In so doing, particular attention is directed to the Legislature's determination that the Shoreline Management Act

> shall be liberally construed to give full effect to the objectives and purposes for which it is enacted. RCW 90.58.900

This liberal construction is to be read in harmony with the Legislative SMA's policy statements that: the shoreline is valuable and fragile, that development is to be coordinated, protecting against adverse effects to wildlife and aquatic life while protecting rights of navigation, that uses shall be preferred consistent with pollution control and prevention of damage to the natural environent, and that permitted uses shall be designed and conducted in so far as practical to minimize damage to the ecology and the environment. RCW 90.58.020.[11]

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[11] More specifically, the Legislature has found that:

> the shorelines of the state are among the most valuable and fragile of its natural resources and that there is great concern throughout the state relating to their utilization, protection, restoration, and preservation. RCW 90.58.020; SMA.

IV

The City of Everett's own legislative process culminated in the SMP, which became a part of State regulation. That Program's goals and objectives "are the foundation upon which the entire Master Program is based". SMP at I-12 These goals and objections, which reinforce SMA policies, clearly make environmental protection critically important, central to the Program. (See Conclusion of Law VIII, below).

V

A basic rule of statutory construction is to give effect to all the language used. In re Marriage of Timmons, supra, at 617. No clause, sentence or word shall be superflous, void or insignificant. UPS v. Department of Revenue, 102 Wn.2d 355, 361-2, 687 P.2d 186 (1984). It violates both the SMA and the SMP to reduce all the policies, goals and objectives on environmental protection to just

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11 (cont.)

The SMA calls for coordinated efforts:

> to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines.
>
> It is the policy of the state to provide for management of the shorelines of the state by planning for and fostering all reasonable and appropriate uses. [. . .] This policy contemplates protecting against adverse effects to the public health, the land and its vegetation and wildlife, and the waters of the state and their aquatic life, while protecting generally public rights of navigation and corollary rights incidential thereto. Id.

compliance with water quality standards. We, therefore, decline to do so.

VI

It is undisputed that the promotion of navigation is a central element in the SMA, and the building of ports is given a high priority. Dredging marine beds is at times a necessary predicate to the creation or modification of ports. But the question of whether the Everett East Waterway Homeport should be built is not an issue before this Board. The location for disposing of the sediments is the issue. As such, as a legal matter there is no heightened state-wide interest in water disposal. Rather, the facts of the particular situation and the applicable law govern.

VII

Shorelines of Statewide Significance:

The RADCAD disposal site is within a shoreline of statewide significance. Developments within such areas are also reviewed for

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11 (cont.)

Further, the SMA states that:

> [i]n the implementation of this policy the public's opportunity to enjoy the physical and aesthetic qualities of natural shorelines of the state shall be preserved to the greatest extent feasible consistent with the overall best interest of the state and the people generally. To this end uses shall be preferred which are consistent with control of pollution and prevention of damage to the natural environment, or are unique to or dependent upon use of the state's shoreline. Id.

consistency with more specific and restrictive SMA/SMP policies. See, WEC, et al. v. Douglas County, et al., SHB Nos. 86-34, 86-36, and 86-39 (January 12, 1988).

In such shorelines, the following uses applicable to this appeal are preferred:

- Preserve the natural character of the shoreline;
- Result in long term over short term benefit;
- Protect the resources and ecology of the shoreline; and
- Increase recreational opportunities for the public in the shorelines. RCW 90.58.020

VIII

SMP Use Policies address specific activities for shorelines areas. The Use Regulations state how activities are to be performed, and are based on the Goals, Objectives and Policies. (P. I-12.)

The following SMP shoreline element goals and objectives are relevant:

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11 (cont.)

And critically, the SMA states that:

> [p]ermitted uses in the shorelines of the state shall be designed and conducted in a manner to minimize, insofar as practical, any resultant damage to the ecology and environment of the shoreline area and any interference with the public's use of the water. Id.

Shoreline Use Element

Goal
To plan and foster all reasonable and appropriate uses while protecting and enhancing the quality of the shorelines of Everett.

Objectives
1. Permit those uses or conditions which allow options for future generations, [. . .]

Conservation Element

The conservation element deals with the preservation of the natural shoreline resources, considering such characteristics as scenic vistas, parkways, estuarine areas for fish and wildlife protection, beaches and other valuable natural and aesthetic features.

Goal
To achieve the preservation of unique, fragile, and scenic elements, and of non-renewable natural resources; while achieving the best management practices for the continued sustained yield of renewable resources of environment.

Objectives

[. . .]

2. Require that all shoreline uses comply with all applicable air and water quality laws and regulations. [This parallels the General Regulation at P. IV-6.]

[. . .]

4. Closely scrutinize the alteration and prevent long-term degradation of submerged lands, unless evidenced as justifiable in the public interest.

5. Provide design and construction standards which will minimize adverse environmental impact for shoreline developments; e.g., piers, bulkheads, fill, etc. [P. II-14.]

For dredging and disposal of spoils, the following SMP Shoreline Use Policies are particularly germane:

Policy No. 1
Dredging and placement of dredge spoils shall be conducted in a manner which minimizes the damage to areas within the context of our shoreline resources.

Policy No. 2
Initial and maintenance dredging, and the placement of dredge spoils shall be conducted in a manner which minimizes the impact on water quality, ecological systems and natural resourecs.

Policy No. 3
Depositing of dredge material in water areas should be allowed only for the improvement of habitat, or where the alternative of depositing material on land is more detrimental to the shoreline resource than depositing it in the water.

[. . .]

Policy No. 5
Land disposal of spoils in diked areas should be conducted in a manner which minimizes the potential adverse effects on the adjacent water body. Design of the disposal ponds, dikes, or lagoon will consider location of the inlet and outlet to prevent short circuiting; installing adequate discharge controls: providing a capacity and a detention time based on the settling characteristics. [All Policies at p. IV-21]

IX

Conditional Use Permits:

The SMP further requires that projects requiring conditional use permits must meet the following criteria:

1. The proposed use will not be contrary to the general intent of Everett's Master Program.

2. The proposed use will not interfere with the normal public use of public shorelines.

3. The proposed use of the site and design of the project will be compatible with other permitted uses in the area.

4. The proposed use will cause no significant adverse effects to the Shoreline environment in which it is to be located.

5. The public interest suffers no substantial detrimental effect. [P. IV-4]

The State by regulation requires these criteria be met. WAC 173-14-140. The Department of Ecology also has to review, and approve or disapprove the issuance of a conditional use shoreline permit, as they did in this instance.

X

SEPA's procedural provisions require that there be an adequate disclosure of environmental impacts. Our review of adequacy is a matter of law (Barrie v. Kitsap County, 93 Wn.2d 843, 613 P.2d 1148 (1980)), guided by the rule of reason (Norway Hill v. King County Council, 87 Wn.2d 267, 552 P.2d 674 (1976)). The EIS is intended to assist the project's formulation at the early stages, and in this case commendably led to a change in disposal sites from the heavily crab inhabited CAD site, to RADCAD with its less dense crab on-site populations.

As a practical matter, we review all the EISs entered into this record that were prepared for the Homeport project: U.S. Navy Final EIS June 1985; Department of Ecology Final Supplemental EIS September 1986; U.S. Army Corps of Engineers Draft Supplemental EIS July 1986, Final Supplemental EIS November 1986; and technical appendices. We

conclude that the Homeport EIS is adequate. The EIS sufficiently discloses the impacts so as to have allowed a sufficiently informed process below.

This determination of EIS adequacy, however, in no way limits the Shoreline Hearings Board's statutory responsibility under the Shoreline Management Act and the SMP, to substantively review de novo the record developed before it, to determine whether there are substantial environmental impacts or other project-related features that violate the law. Moreover, if violations are found, the Board has the authority to order conditions, to mitigate the project's impacts and thereby bring it into conformance with the law and allow the permit's affirmation. See, e.g., San Juan County v. Department of Natural Resources, 28 Wn. App. 796, 626 P.2d 995 (1981).[12]

XI

We conclude, based on the totality of the facts and the requirements of law, that additional feasible practical conditions are necessary to lawfully allow the disposal of 3,300,000 yd^3 of Everett East Waterway sediments into Puget Sound without violating the Shoreline Management Act and the Everett SMP. To allow the permit to stand as presently issued would thwart policies, general intents, and specific provisions of the SMA and the SMP.

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12 In the past year alone, the Board has affirmed at least six shoreline permits after adding conditions, e.g., SHB Nos. 86-22, 86-29, 86-49, 87-4, 87-22, and 87-25.

XII

In reviewing the proposed sediment disposal, it is necessary to assess the impacts in the surrounding area as well, for RADCAD is not an island. The site is adjacent to Dungeness crab populations with the highest pregnant female concentrations observed in Puget Sound. The area is in a migration route for the important Snohomish River anadromous fish-runs of salmon, searun steelhead, cutthroat, and Dolly Varden. It is in the productive salt and seawater mixing area of the Snohomish River estuary. We conclude that the area is a unique, fragile, natural shoreline of this State.

The significant project risks are: inadequate sediment characterization, with likely disposal of toxic sediments unconfined, inadequate capping so that toxic sediments are not isolated from the environment, misplacement of sediments, and potential high mass losses of clean sediments off-site. These significant risks can be feasibly mitigated by Shoreline permit operational conditions/criteria. Absent such conditions, the disposal at the RADCAD will likely be more environmentally damaging than upland disposal at Smith Island, in violation of the SMP Policy No. 3.

We further conclude that disposal at RADCAD without additional shoreline permit criteria will likely:

- cause chronic long-term toxic effects to the aquatic life of Puget Sound;

- degrade submerged lands long-term;
- not preserve or protect the natural shorelines;
- remove options for future generations;
- result in long-term detriment;
- decrease recreational opportunities for the public;
- be a use inconsistent with the control and prevention of pollution;
- interfere with normal public fishing and marine harvesting uses;
- cause detrimental effects to the public interest;

violating the Shoreline Management Act and the Everett Shoreline Master Program in many ways. RCW 90.58.020; WAC 173-14-140; SMP at pp. II-14, IV-4, IV-6, and IV-21. And critically, feasible methods to minimize pollution will not have been employed. RCW 90.58.020.

XIII

The practical solution, to protect the natural environment and prevent damage to aquatic life in Port Gardner, is to thoroughly and properly characterize the sediments in advance of disposal, using feasible practical methods, as called for since at least 1984. This can be done expeditiously and very likely in a manner allowing the Navy to proceed on schedule. Evidence presented to-date indicates that there are likely sufficient clean sediments available, and once they are properly characterized, the Navy can proceed on-schedule with the first year's construction. The conditions will ensure that the

Navy's promised performance, relied on in the EIS and decision documents, is tested in reality, so that if predicted performance fails to be achieved, this can be timely detected in advance of massive disposal of contaminated sediments.

XIV

The Shorelines Hearings Board has authority to add reasonable conditions, based on the record, to mitigate a project's effects and have it conform to the requirements of the SMA and SMP, thus allowing the permit's affirmance. This practice is well-established and is inherent in the Board's authority to deny a permit. See, e.g. San Juan County, supra.

XV

The additional conditions are based upon feasible methods. The use of volumetric dredge units for sediment characterization is a known methodology in capping projects. The two-tiered characterization approach, sediment chemistry first, followed only if necessary by biological testing, is a part of a 1984 shoreline permit. SHB No. 84-41, Sadleir-Orme, supra; see Fourmile Rock interim criteria. Biological testing of sediment in that permit included amphipod and oyster larvae bioassay. Microtox testing of sediments has been in use since 1985. The PSDDA chemical concentration criteria have been already incorporated, in part, into

the Homeport shoreline permit through DOE's use of pass/fail criterion No. 2 for in-situ measurement of cap adequacy.[13]

The chemicals to be tested have been known since before the project's inception to have toxic properties and were a subject of early resource agency and scientific concern. The chemical tests to be required are known, with well-established protocols. The combined chemistry/biological testing is also economically feasible, costing approximately $2,000 to $3,000 per composite core analysis.

The disposal placement conditions/criteria rely on the Navy's own data and witnesses.

XV

We conclude, based on the totality of facts and given the requirements of law, that disposal of Everett East Waterway sediments can be accomplished in conformance with the Shoreline Management Act and Everett Shoreline Act, but only if the following conditions are a part of the shoreline permit:

I. All sediment used in the Berm and the Cap shall be proven to be Clean prior to disposal. Clean is defined as:

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[13] The Department has used a more restrictive concentration (e.g., ML-1), than this Opinion's conditions (e.g., ML-2; see Conclusion of Law XV, below, at I.A.2.)

A. Berm and Phase I

1. For every 48,000 yd^3 ("dredge unit") composited sample of sediment from 8 core samples, sediment in this dredge unit (or sub-unit therein at permittee's option) shall be Clean if the concentration of every chemical of concern and of each group of chemicals is less than or equal to 125% of SL 1 levels (Attach. 4).

2. For any dredge unit (or a sub-unit therein at permittee's option), if any chemical of concern or any group of chemicals' concentration exceeds 125% of SL 1 but is less than 100% of ML 2, sediment in that unit (or sub-unit) is Clean only if it passes biological testing (i.e. sediment toxicity and bioaccumulation) as delineated for unconfined open-water disposal in PSDDA (January 1988) (Exh. A-16M).

3. For any dredge unit or sub-unit, sediments are Contaminated and cannot be disposed unconfined if any chemical or any group of chemicals' concentration equals or exceeds 100% of ML 2.

B. Phase II

For every 24,000 yd^3 ("Phase II dredge unit") composited sample of sediment from 4 core samples, sediment in this dredge unit (or sub-unit therein at

permittee's option), shall be Clean if the concentration of every chemical of concern and of each group of chemicals is less than or equal to 125% of SL 1 levels. . . . (Then the same text as for the Berm and Phase I, I.A. above.)

II. Placement of Dredged Sediment:

A. Berm

1. Up to 500,000 yd^3 of material can be disposed of at the RADCAD site during this stage.

2. The first five barge dumps do not have to conform to conditions Nos. II. A. 3 and 4, below.

3. 90% of the material shall be found within the berm boundaries as shown on Attachment 3 herein. (All location site references in Conclusion of Law XV conditions are to this document.)

4. Significant thickness of berm material, i.e. greater than 6 inches (approximately 15 centimeters), shall not be located 500 feet or more outside these berm boundaries.

5. A discrete berm shall be formed.

B. Phase I

1. Contaminated Material

a. Up to 100,000 yd^3 of contaminated material can be disposed of at the RADCAD site during this stage.

b. 95% by volume of the contaminated material dredged shall be found within the first year boundary for contaminated material.

c. Contaminated material greater than 3 cm. in thickness (approximately 1.2 inches) shall not to be located 250 feet or more outside the first year boundary for contaminated material, or outside the first year construction boundary.

d. All contaminated material greater than 3 cm. in thickness shall be covered with a 1 meter consolidated cap.

2. Cap Material

a. 90% by volume of the cap material shall be found within the first year construction boundary.

b. Significant thickness of cap material, i.e. greater than 6 inches, shall not be located 500 feet or more outside the first year construction boundary or at less than the 350 feet water depth contour.

C. Phase II

1. Contaminated Material

a. 95% by volume of the contaminated material dredged shall be found within the second year boundary for contaminated material.

b. Contaminated material greater than 3 cm. in thickness shall not be located 250 feet outside the second year contamination boundary, or outside the second year construction boundary.

c. All contaminated material greater than 3 cm. in thickness shall be covered with a 1 meter consolidated cap.

2. Cap Material

a. 90% by volume of the cap material shall be located within the second year construction boundary.

b. Significant thickness of cap material, i.e. greater than 6 inches shall not be located 500 feet or more outside the second year construction boundary or at less than the 310 foot water depth contour.

III. General Conditions:

A. Permittee has the burden to prove that all conditions have been passed.

B. Permittee can proceed to Phase I and Phase II only upon the Department of Ecology's determination and written notification that the preceding stage's conditions have been passed.

C. Upon the Navy's written notification that it has completed Phase II disposal and monitoring, the Department

shall review Phase II for compliance and shall order any such measures necessary for full compliance with this permit. Final compliance with this permit shall be upon the Department's determination and written notification.

D. The Department shall conduct its reviews and provide its notifications in a timely reasonable manner. All previous permit conditions, either express or implied, imposing time restrictions on the Department are stricken (e.g., berm review).

E. These conditions are in addition to those in the shoreline permit as previously issued, and supercede them where inconsistent.

F. In performing its' responsibilities under this permit, the Department may, at its discretion, consult with other agencies at the local, State and Federal levels.

G. This shoreline permit does not prevent the Department from taking other enforcement action not inconsistent with this permit.

XVII

In real life terms, as Department of Ecology staff candidly stated, this massive dredge disposal project could have practical

precidential effect.[14] A carefully designed and operated cap disposal project could be invaluable to the people of Washington State. Harbors and ports often require dredging to remain functional. Suitable upland sites for dredge disposal are increasingly scarce.

One conclusion clearly emerges from both Shoreline Hearings Boards' Opinions: that a carefully designed and conducted disposal project can proceed and be in conformity with the law. It is the contours of that "care" necessary to minimize damage to the environment and to conform to the law, that divides the Board into two equal groups.

Half the Shoreline Hearings Board has concluded that additional safeguards are feasible, practical, and necessary to ensure compliance with the Shoreline Management Act and the Everett SMP. This is based in large measure on data and evidence provided by the Navy. It is well within the Navy's compass to conform its conduct and be measured by the more rigorous standards recited in this Opinion, while still proceeding expeditiously with the Homeport construction. Doing so would satisfy the entire Boards' concerns, and best exemplify federal-state cooperation, a theme that runs with majestic sweep through environmental laws of the past quarter century.

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[14] We are mindful that neither SHB Opinion is entitled to legal precidential effect, as neither has garnered a majority. WEC v. Douglas County, supra, at fn.2.

DONE this 17th day of May, 1988.

SHORELINES HEARINGS BOARD

JUDITH A. BENDOR, Member

LES ELDRIDGE, Member

DENNIS J. McLERRAN, Member

[See other Opinion]
WICK DUFFORD, Presiding

[See other Opinion]
LAWRENCE J. FAULK, Member

[See other Opinion]
NANCY BURNETT, Member

List of Attachments

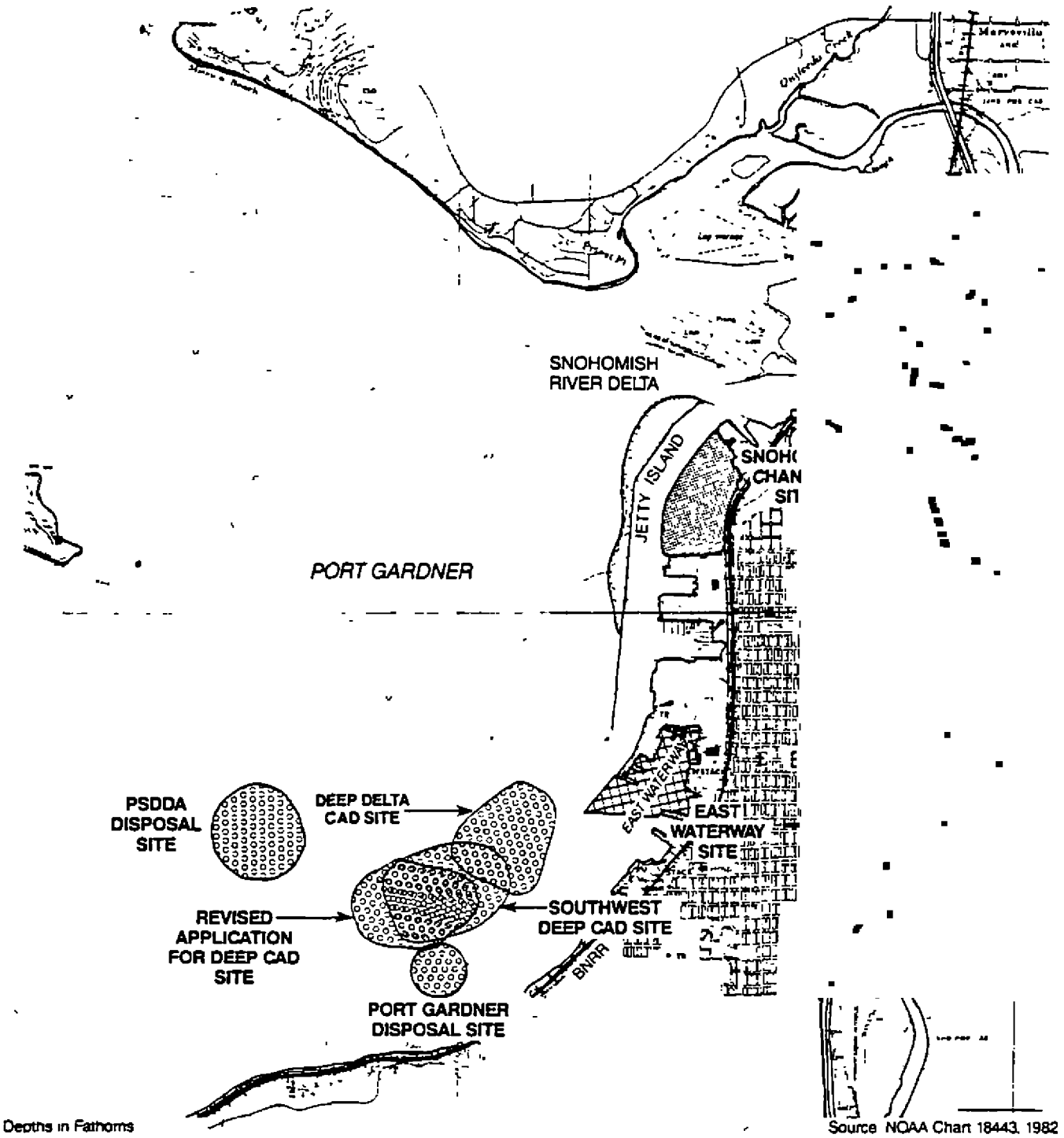
1. RADCAD/Disposal Site Location (Exhibit A-3A; Fig. 3 in Corps Final Supplemental EIS, Vol. 1 (November 1986)).

2. Female Crab Concentrations June 1987 (Exhibit R-1; Fig. 4 in June 1987 Cruise Report).

3. RADCAD Site Diagram (Exhibit A-11; Fig. 1.4 in Final Report Dredging and Disposal Monitoring Plan (November 9, 1987).

4. Chemicals and Criteria Levels (Exh. A-16F (excerpt)).

List of Attachments



N

SCALE IN YARDS

0 1,000 2,000

Dredging Area

Open Water Sites

Nearshore Sites

Upland Sites

Figure 3-8.
Location Map of Dredging Area and Alternative Disposal Sites.

Attachment 1

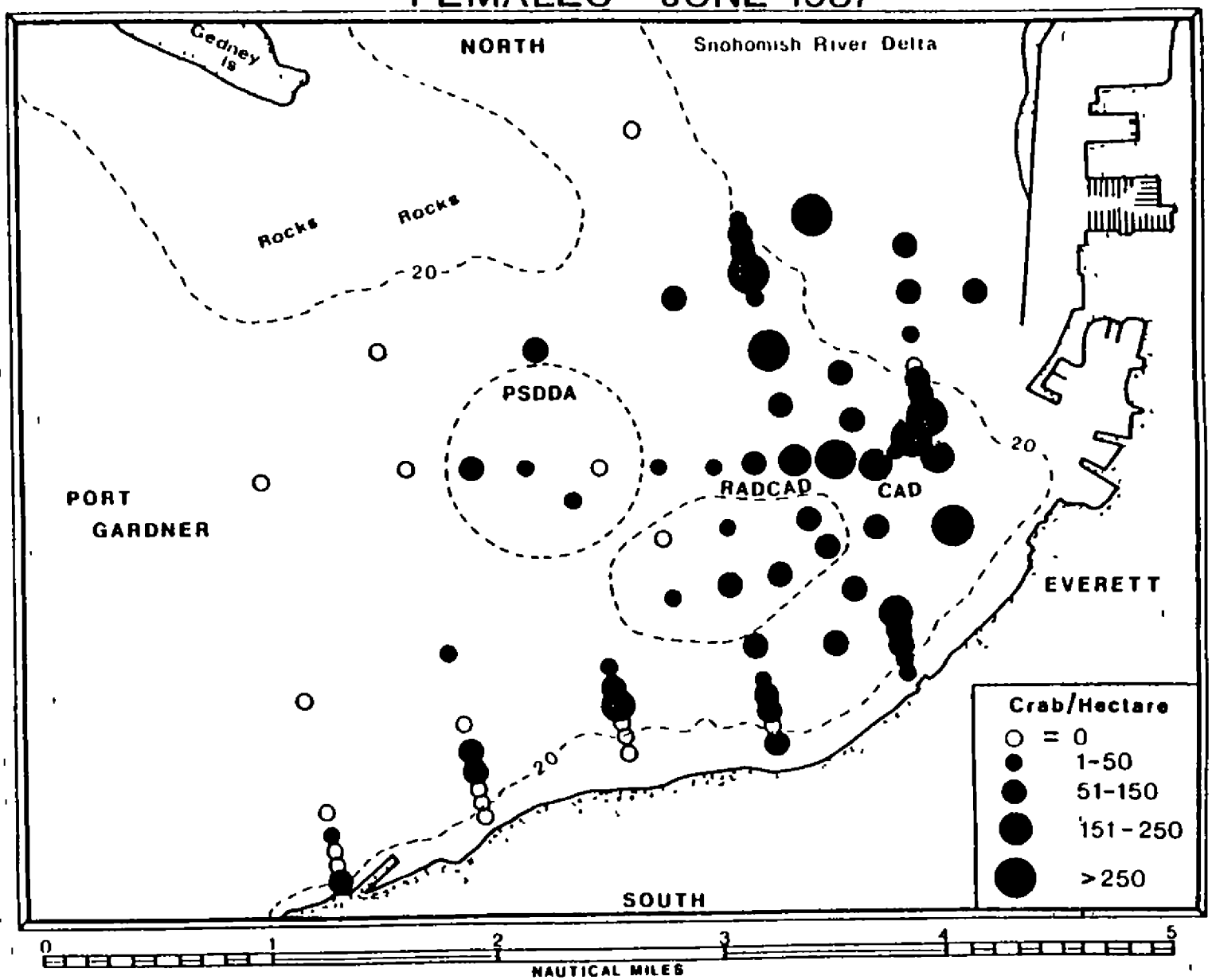


Figure 4. Map of Port Gardner showing the distribution of female Dungeness crab caught in the beam trawl during April 1987.

JUNE

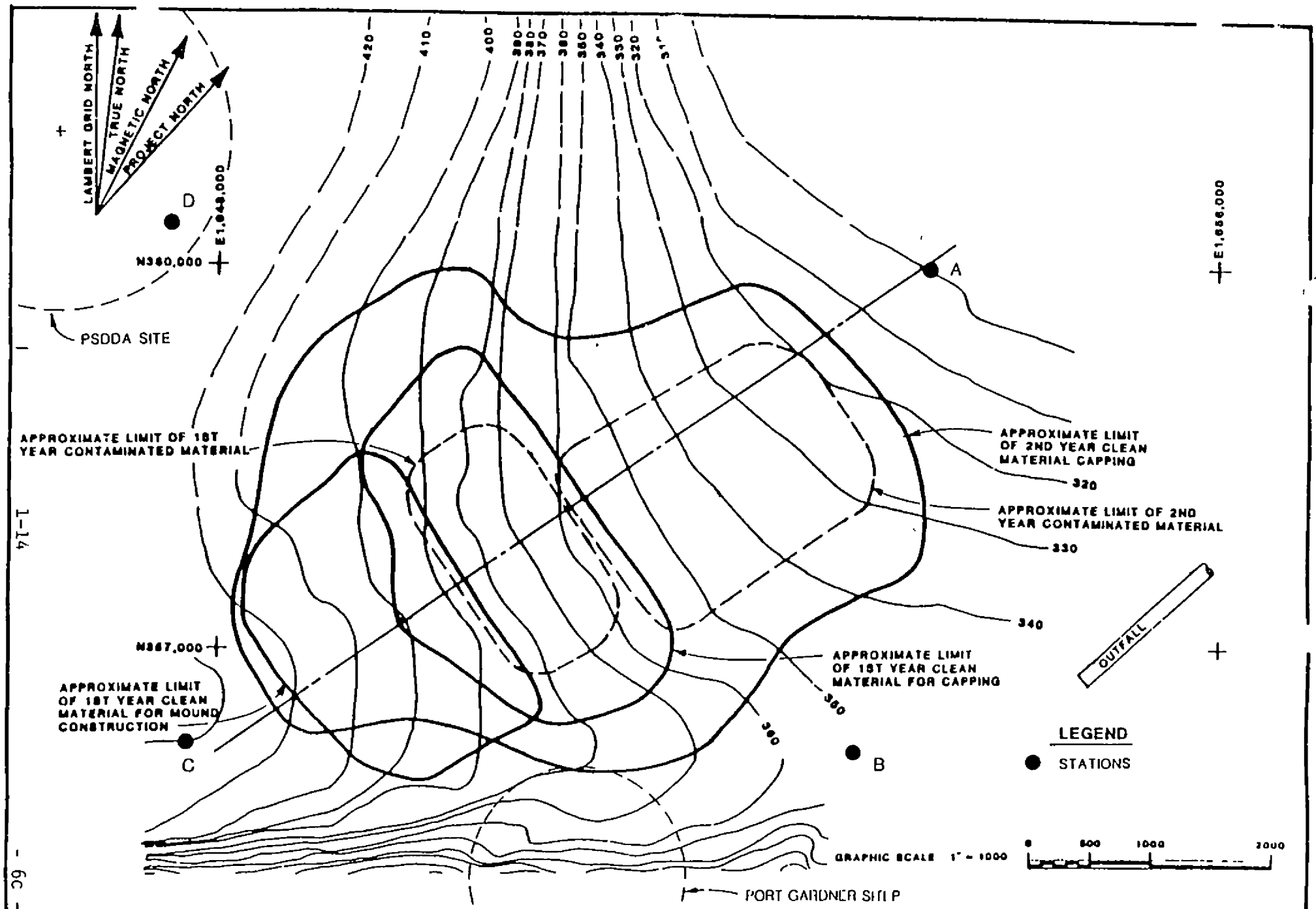


FIGURE 1.4 MOORED CURRENT METER STATIONS

EXHIBIT F

TABLE 2

Summary of Sediment Chemistry Data

Chemical	PSDDA SL	PSDDA ML1*	4-Mile Rock 1254 Criteria	Pt Gardner Interim Criteria	E1T	E1D	E2T	E2B	E3T	E3B	E4T	E4M	E4B	E5T
METALS (mg/kg dry weight ppm)														
Antimony	2.6	3.2	-	-	<4.4	-	4.8	-	-	-	-	-	-	-
Arsenic	70.0	65.0	19.0	11.5	10.7	8.99	4.9	9.19	7.2	6.94	8.5	13.6	9.3	42.5
Cadmium	0.96	5.8	0.9	0.7	.55	0.20	1.31	0.325	2.05	0.532	2.44	1.47	0.373	2.36
Copper	80.0	310.0	115.0	68.0	127.4	44.8	89.2	26.3	112.9	35.6	97.8	105.4	27.7	110.1
Lead	70.0	300.0	150.0	33.0	85.0	5.0	43.4	10.1	90.6	11.6	52.8	71.4	10.1	138.7
Mercury	0.21	0.41	1.5	0.15	0.608	0.051	0.349	0.031	0.445	0.055	.264	3.402	0.073	0.852
Nickel	28.0	28.0	-	-	82.2	63.7	60.3	53.0	70.6	52.5	67.4	72.4	72.5	63.1
Silver	1.2	1.2	-	-	.330	-	0.203	-	-	-	-	-	-	-
Zinc	160.0	260.0	450.0	105.0	317	80.5	118.4	67.9	255	64.2	240	205.0	92.4	286
ORGANICS (ug/kg dry weight ppb)														
Low Molecular Weight PAH	610	5200	655.0 1/	680.0 1/	21,181	ND	-	673	10,105	1011	4919	43.343	59	47.591
Naphthalene	210	2100			1,980	ND	-	189	1,509	277	989	13.280	24	8.337
Acenaphthylene	66	560			-	-	-	-	-	-	-	-	-	-
Acenaphthene	63	500			-	-	-	-	-	-	-	-	-	-
Fluorene	64	540			1,992	ND	-	71	1,171	149	553	5.678	6	5.756
Phenanthrene	320	1500			9.103	ND	-	246	3.487	378	1734	14,519	17	20,118
Anthracene	130	960			6.481	ND	-	116	3,472	132	1307	4,290	ND	9,123
2-Methylnapthalene	67	670			1.425	ND	-	51	461	76	337	5,576	12	3.257
High Molecular Weight PAH	1400	12000	14.000	2.590	48.724	ND	-	2187	34,925	2170	26398	27,941	28	121,572
Fluoranthene	630	1700			9,626	ND	-	219	5.249	345	5491	7.800	9	27.554
Pyrene	430	2600			21.390	ND	-	461	11,341	642	12026	15.398	17	45,330
Benz(a)anthracene	450	1300			-	-	-	-	-	-	-	-	-	-
Chrysene	670	1400			12.775	ND	-	442	8.920	423	7745	3.457	ND	23,773
Benzofluoranthenes (B & K)	800	3200			-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	680	1600			4.733	ND	-	1065	9,465	810	1126	1.286	ND	24,915
Indeno(1,2,3-c,d)pyrene	69	600			-	-	-	-	-	-	-	-	-	-
Dibenzo a,h)anthracene	120	230			-	-	-	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	540	670			-	-	-	-	-	-	-	-	-	-
CHLORINATED HYDROCARBONS														
1,3-Dichlorobenzene	170	b												
1,4-Dichlorobenzene	35	110												
1,2-Dichlorobenzene	19c	35												
1,2,4-Trichlorobenzene	6.4	31												
Hexachlorobenzene	23	70												
PHTHALATES														
Dimethyl phthalate	160	d												
Diethyl phthalate	97	d												
Di-n-butyl phthalate	1400	d												
Butyl benzyl phthalate	470	d												
Bis(2-ethylhexyl)phthalate	1900	d												
Di-n-octyl phthalate	68000	d												
PHENOLS														
Phenol	120	420												
2-Methylphenol	6.3	63												
4-Methylphenol	120	670												
2,4-Dimethyl phenol	10c	29												
Pentachlorophenol	140	b												
MISCELLANEOUS EXTRACTABLES														
Benzyl alcohol	10c	57												
Benzoic acid	216c	650												
Dibenzofuran	54	540												
Hexachloroethane	1400	14000												
Hexachlorobutadiene	29	120												
N-Nitrosodiphenylamine	22	40												
VOLATILE ORGANICS														
Trichloroethene	160f	1600f	-	-										
Tetrachloroethene	14	140	-	-										
Ethylbenzene	3.7	33	-	-	ND	ND	-	ND	1192	ND	10907	2030	12	3344
Total xylenes	12	100	-	-	ND	ND	-	ND	2006	ND	15903	2120	ND	5805
PESTICIDES/PCBS														
Aldrin	6.9	14.9	9.0	9.0										
Total Chlordane	5	g												
Dieldrin	5	g												
Heptachlor	5	g												
Endrin	5	g												
TOTAL PCBs	130	130	740	380	585 2/	ND 2/	ND 2/	-	391 2/	ND 2/	391 2/	581 2/	ND 2/	668 2/

ND = <1.0 ug/kg dry weight (ppb)

1/ Excludes 2-Methylnapthalene

2/ Arochlor 1254 only

NOTES

1 Columns E1T through V2B are core sample chemical data from the First Battelle Sediment Chemistry

Columns EEW1 through EEW6 are chemical data from composite "clean" native sediment samples analyzed in the Second Battelle Sediment Chemistry

A16F

3 Columns X1B and X2B are, respectively, chemical data from Corps of Engineers analysis and the Third Battelle Sediment Chemistry analysis of split samples of the same "clean" native sediment composite sample

4 Colums 1-18 are chemical data from the Hart-Crowser chemical analysis of "clean" mound and cap material for Phase I dredging

Attachment 4 (Excerpt of Exh. A-16F)

TABLE II.8-4. SCREENING AND MAXIMUM LEVEL CHEMISTRY VALUES

Chemical	SL*	ML1*	ML2*	ML3*
METALS (mg/kg dry weight; ppm)				
Antimony	2.6	3.2	26	52
Arsenic	70	85	700	1400
Cadmium	0.96	5.8	9.6	19.2
Copper	80	310	800	1600
Lead	70	300	700	1400
Mercury	0.21	0.41	2.1	4.2
Nickel	28	28	49(a)	98
Silver	1.2	1.2	5.2	10.4
Zinc	160	260	1600	3200
ORGANICS (ug/kg dry weight; ppb)				
Low molecular weight PAH	610	5200	6100	12200
Naphthalene	210	2100	2100	4200
Acenaphthylene	64	560	640	1280
Acenaphthene	63	500	630	1260
Fluorene	64	540	640	1280
Phenanthrene	320	1500	3200	6400
Anthracene	130	960	1300	2600
2-Methylnapthalene	67	670	670	1340
High molecular weight PAH	1800	12000	18000(a)	36000
Fluoranthene	630	1700	6300	12600
Pyrene	430	2600	4300(a)	8600
Benz(a)anthracene	450	1300	4500	9000
Chrysene	670	1400	6700	13400
Benzofluoranthenes	800	3200	8000	16000
Benzo(a)pyrene	680	1600	6800	13600
Indeno(1,2,3,-c,d)pyrene	69	600	690(a)	1380
Dibenzo(a,h)anthracene	120	230	1200	2400
Benzo(g,h,i)perylene	540	670	5400	10800

TABLE II.8-4. (Continued)

CHLORINATED HYDROCARBONS				
1,3-Dichlorobenzene	170	b	b	b
1,4-Dichlorobenzene	26	110	260	520
1,2-Dichlorobenzene	19c	35	50a	100
1,2,4-Trichlorobenzene	6.4	31	64	128
Hexachlorobenzene	23	70	230	460
PHTHALATES(c)				
Dimethyl phthalate	160	d	d	d
Diethyl phthalate	97	d	d	d
Di-n-butyl phthalate	1400(a)	d	d	d
Butyl benzyl phthalate	470	d	d	d
Bis(2-ethylhexyl)phthalate	1900(a)	d	d	d
Di-n-octyl phthalate	68000	d	d	d
PHENOLS				
Phenol	120	420	1200	2400
2-Methylphenol	6.3	63	63(a)	126
4-Methylphenol	120	670	1200	2400
2,4-Dimethyl phenol	10c	29	29	58
Pentachlorophenol	140	b	b	b
MISCELLANEOUS EXTRACTABLES				
Benzyl alcohol	10c	57	73	146
Benzoic acid	216c	650	650(a)	1300
Dibenzofuran	54	540	540	1080
Hexachloroethane(e,f)	1400	14000	14000	28000
Hexachlorobutadiene	29	120	290	580
N-Nitrosodiphenylamine	22	40	220	440
VOLATILE ORGANICS				
Trichloroethene(e,f)	160	1600	1600	3200
Tetrachloroethene	14	140	140(a)	280
Ethylbenzene	3.7	33	37(a)	74
Total xylenes	12	100	120(a)	240

TABLE II.8-4. (Continued)

PESTICIDES				
Total DDT	6.9	14.9	69	138
Aldrin	5	g	g	g
Chlordane	5	g	g	g
Dieldrin	5	g	g	g
Heptachlor	5	g	g	g
Lindane	5	g	g	g
TOTAL PCBs	130	130	2500	5000

* The following procedures were used to develop SL, ML1, ML2, and"ML3:

SL = 10% of ML2 or reference area concentration, whichever is higher, but no greater than the lowest AET for a range of biological indicators.
ML1 = Lowest Apparent Effects Threshold Value (LAET) for a range of biological indicators.
ML2 = Highest Apparent Effects Threshold Value (HAET) for a range of biological indicators.
ML3 = (ML2) x (2).

(a) The ML set for this chemical is based on a biological indicator with a definitive AET. These values may be adjusted upward based on another biological indicator which is currently represented by a "greater than" value for the AET (see the Sediment Quality Values report; exhibit E-21). For such biological indicators, the "greater than" value is the highest concentration of a chemical above which there has yet to be a bioassay that met disposal guidelines, and indicates that there were no impacted stations with chemical concentrations above this value (a requirement for setting definitive AET). During review of actual testing data, it was determined that these "greater than" values are useful estimates of the maximum level until more definitive data are available.

(b) No ML was originally set for these chemicals because definitive AET could not be set for any biological indicator (see discussion on "greater than" values in footnote a). ML values may be assigned for several of these chemicals based on the highest "greater than" value presented in the Sediment Quality Values report (exhibit E-21).

TABLE II.8-4. (Continued)

(c) For these compounds, the reference concentration was higher than the calculated value of SL so SL was set at the reference value.

(d) Biological testing should not be triggered solely by the presence of phthalates. Because these compounds are often present as laboratory chemicals of concern, the highest AET was used as the screening level and no maximum levels were set.

(e) These ML2 values were set using the Equilibrium Partitioning approach (Tetra Tech 1986j) because no AET values were available.

(f) For chemicals with ML2 values set by the Equilibrium Partitioning approach, ML1 was set equal to ML2, and SL and ML3 values were calculated from ML2 according to the formulas given above.

(g) SL for these pesticides was set to 5 times an assumed analytical detection limit of 1 ug/kg dry weight sediment. No sediment quality values were available for setting maximum levels.

8.4 Procedure for Defining Human Health Bioaccumulation Levels. Bioaccumulation values for those chemicals that are a human health concern because of fish consumption were calculated by estimating daily consumption rates of fish that could have been exposed at the disposal site, calculating the target tissue concentration values, and comparing the target values to data on bioaccumulation for species from Puget Sound. These target values will be used to interpret laboratory bioaccumulation tests on proposed dredged material relative to human health concerns. The Puget Sound bioaccumulation data used in this study included laboratory and field data for species (mostly bivalves) from sediments that are representative of both reference and non-reference areas throughout Puget Sound.

8.4.1 Assumptions Made in Calculating Adjusted Health Indicators. Adjusted health indicators were developed by EPWG to approximate tissue concentrations of concern. The following simplifying assumptions were made concerning the relationship between tissue concentrations of chemicals of concern in aquatic species and potential human health concerns:

- Human exposure route is primarily through consumption of fish that could be directly exposed to bottom sediments at the disposal site (i.e., flatfish)

BEFORE THE
SHORELINES HEARINGS BOARD
STATE OF WASHINGTON

TULALIP TRIBES OF WASHINGTON, Appellant, v. CITY OF EVERETT and WASHINGTON STATE DEPARTMENT OF ECOLOGY, Respondent.	SHB NO. 87-33 ORDER GRANTING MOTION FOR DISMISSAL OF ISSUES CONCERNING TRIBAL TREATY RIGHTS

On June 10, 1987, the City of Everett issued a conditional use permit under the Shoreline Mangement Act to the United States Navy to undertake dredging, dredge spoils disposal and water-oriented construction activities in connection with the creation of homeport facilities for an aircraft carrier battle group. On July 8, 1987, the Washington State Department of Ecology approved the permit issued by the City, subject to added conditions.

On August 5, 1987, the Tulalip Tribes of Washington filed a Request for Review with this Board, challenging the permit, as approved. In their request the Tribes alleged that the permit

decision conflicts with the policies and procedures of the Shoreline Management Act because the decision "did not consider nor comply with the Act's prohibition against impairment of federally secured treaty rights."

On September 4, 1987, Ecology filed a Motion to Partially Dismiss through which it asserted that this Board lacks subject matter jurisdiction over the treaty rights issue. The motion was accompanied by a supporting memorandum. On September 17, 1987, the Tribes filed a memorandum in opposition to Ecology's motion.

The Board has reviewed the documents enclosed or incorporated by reference into the submissions of the parties, has considered the arguments of the parties and is fully advised in this matter. We decide the motion as follows:

I

The Shoreline Management Act (SMA), chapter 90.58 RCW, sets forth a broad statement of policy regarding the "utilization, protection, restoration and preservation" of the shorelines of the state. RCW 90.58.020. This policy is to be implemented primarily through two regulatory mechanisms: 1) local shoreline master programs constituting use regulations for shoreline development, and 2) a permit system for prior approval of specific projects. RCW 90.58.080, 100, 140.

II

The City of Everett has adopted a shoreline master program which has been approved at the state level by Ecology and incorporated into the state code of administrative regulations. WAC 173-19-3904. Everett's master program incorporates provisions for conditional uses and variances as mandated by RCW 90.58.100(5).

The City has also established a permit program which covers substantial developments, conditional uses and variances. See RCW 90.58.140(3).

III

The Shorelines Hearings Board was created as a quasi-judicial body with express authority to review the granting, denying or rescinding of permits pursuant to the SMA. RCW 90.58.170, 180.

IV

In the instant case we are asked to review a conditional use permit, issued by the City and thereafter reviewed and approved by Ecology pursuant to RCW 90.58.140(12). The project is a substantial development, as defined in RCW 90.58.030(3)(e).

Substantial developments are governed by the use regulations of the master program. A substantial development which is also a conditional use is subject to additional criteria under the master program and Ecology's permit regulations.

The statute establishes a substantive standard for permit review

in RCW 90.58.140(2)(b). After Ecology has approved the local master program, that subsection allows permits to be issued:

> only when the development proposed is consistent with the applicable master program and the provisions of chapter 90.58 RCW.

V

This Board is wholly a creature of statute and the scope of its authority is limited by the grant of power expressly stated or necessarily implied by its enabling legislation. See, Human Rights Commission v. Cheney School District, 97 Wn.2d 118, 641 P.2d 143 (1982); Chaussee v. Snohomish County Council, 38 Wn. App. 630, 689 P.2d 1084 (1984).

In the SMA we have found an express grant of power to this Board only to conduct permit reviews in accordance with the substantive standards set forth in RCW 90.58.140.

VI

We have consistently held that legal requirements imposed by related statutes or ordinances, such as zoning codes, are not within this Board's jurisdiction. E.g., Foulks v. King County and Washington Department of Transportation, SHB 80-17 (1980).

RCW 90.58.360 reinforces this interpretation. The section states:

> Nothing in this chapter shall obviate any requirement to obtain any permit, certificate, license or approval from any state agency or local government.

The clear purport of this language is that the SMA and other regulatory programs are separate. There is nothing in the Act to suggest that the review Board established for shorelines decisions was intended to review the requirements of other regulatory programs.

VII

Similarly, the section which precedes RCW 90.58.360 speaks to a limitation of the reach of the SMA.

RCW 90.58.350 states:

> Nothing in this chapter shall affect any rights established by treaty to which the United States is a party.

Again, there is nothing in the Act to suggest that this limiting language is to be construed as a grant of positive jurisdiction to this Board in the conduct of permit reviews.

Earlier this year in Tulalip Tribes, et al. v. BCE Development, et al., SHB 87-5 &6, (July 23, 1987), we concluded that RCW 90.58.350 expresses what the Supremacy Clause of the United States Constitution would necessitate in any event. A state statute cannot contravene a federal treaty. We adhere to our earlier decision.

VIII

The State Environmental Policy Act (SEPA), chapter 43.21C RCW,

explicity supplements other statutory authorities. RCW 43.21C.060. Accordingly, authority to examine whether a proposed development is consistent with the SMA includes authority to review compliance with SEPA by necessary implication. See generally, Nisqually Delta Association v. DuPont, 103 Wn.2d 720, 696 P.2d 1222 (1985); Kitsap County v. Department of Natural Resources, 99 Wn.2d 386, 662 P.2d 381 (1983).

However, nothing has been identified which implies that jurisdiction to conduct SMA permit reviews necessarily involves this Board in determining the scope of federal treaties with Indian Tribes.

IX

Administrative boards are established to focus specialized expertise on particular areas. The Shorelines Hearings Board is a state body created to review a defined category of local land-use decisions, structured for a membership familiar with relevant environmental and land-use matters. See RCW 90.58.170, RCW 43.21B.020. Read as a whole, the SMA fails to communicate any sense that this Board was expected to venture into a different highly specialized field -- that of federal Indian law.

Based on the foregoing, we conclude that the Motion to Partially Dismiss should be granted. We hold that the Board lacks jurisdiction over the subject matter of the consistency of the conditional use permit under review with federally secured treaty rights.

X

This ruling should not be interpreted to mean that local and state government need not consider Indian fishing rights in determining whether to grant, condition or deny a substantial development or conditional use permit. Where competing use determinations involvng Indian fishing must be made or where environmental impacts on Indian fishing and the fisheries resource must be evaluated under SEPA, there must necessarily be consideration on Indian fishing rights. We do not hold that Indian fishing rights are not appropriately considered in the permitting process, we hold that the extent of such rights is not properly adjudicated in this forum.

In addition, we reiterate the statement made in Tulalip Tribes, et al. v. BCE Development, et al., SHB 87-5&6 (July 23, 1987), where we said that, where appropriate, the parties "may seek to introduce evidence, for example, on the Tribes' usual and accustomed fishing grounds, their areas of navigation, and so forth . . . " to assist the Board in determing conformance with the Shoreline Management Act, SEPA or the local master program.

ORDER

The Request for Review filed by the Tulalip Tribes herein is dismissed insofar as it raises an issue of the consistency of the shoreline conditional use permit under review with federally secured treaty rights.

DONE this 8th day of January, 1988.

SHORELINES HEARINGS BOARD

WICK DUFFORD, Chairman

1/4/88

LAWRENCE J. FAULK, Member

JUDITH A. BENDOR, Member

DENNIS C. MC LERRAN, Member

NANCY BURNETT, Member

LES ELDRIDGE, Member